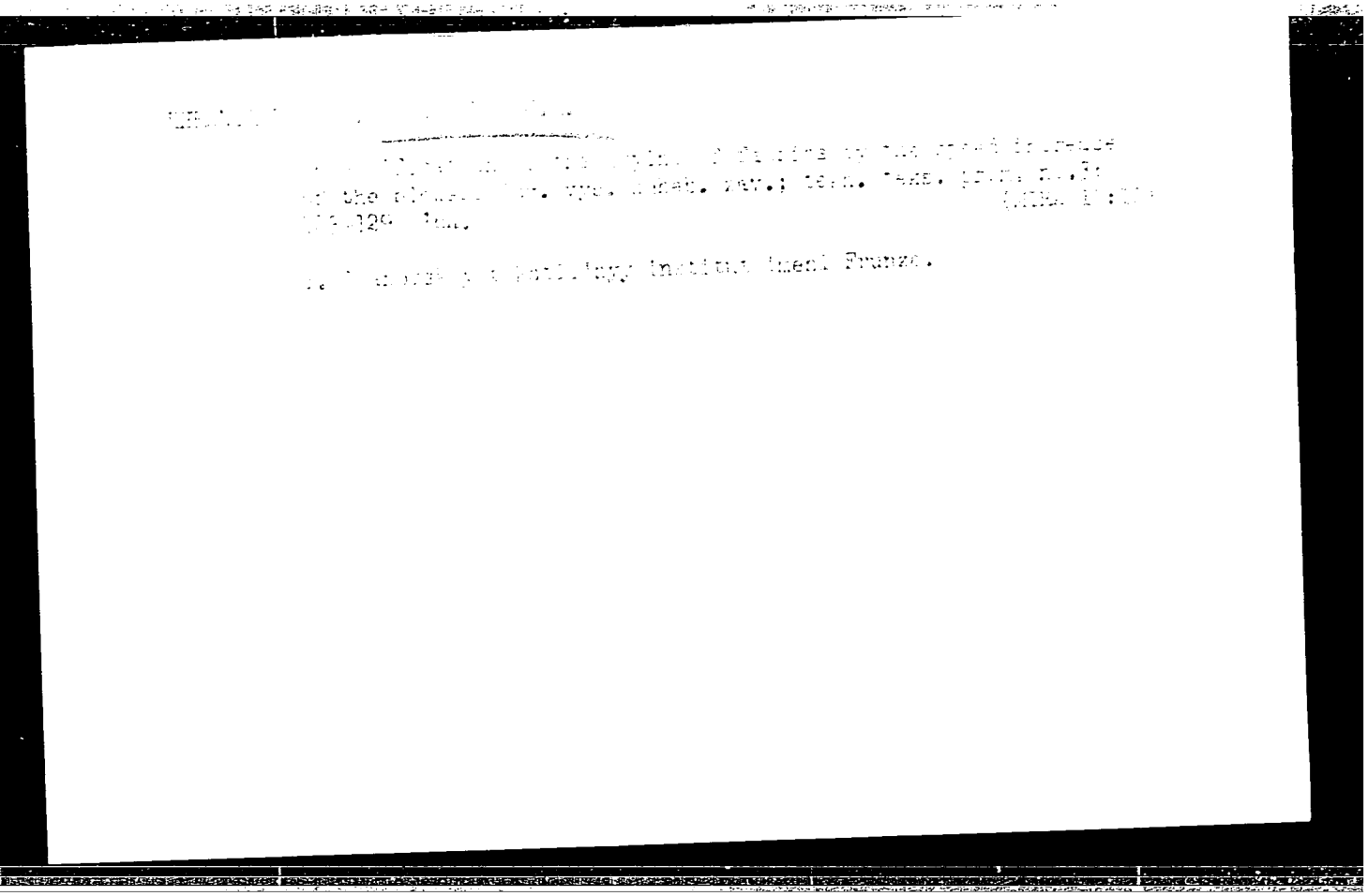
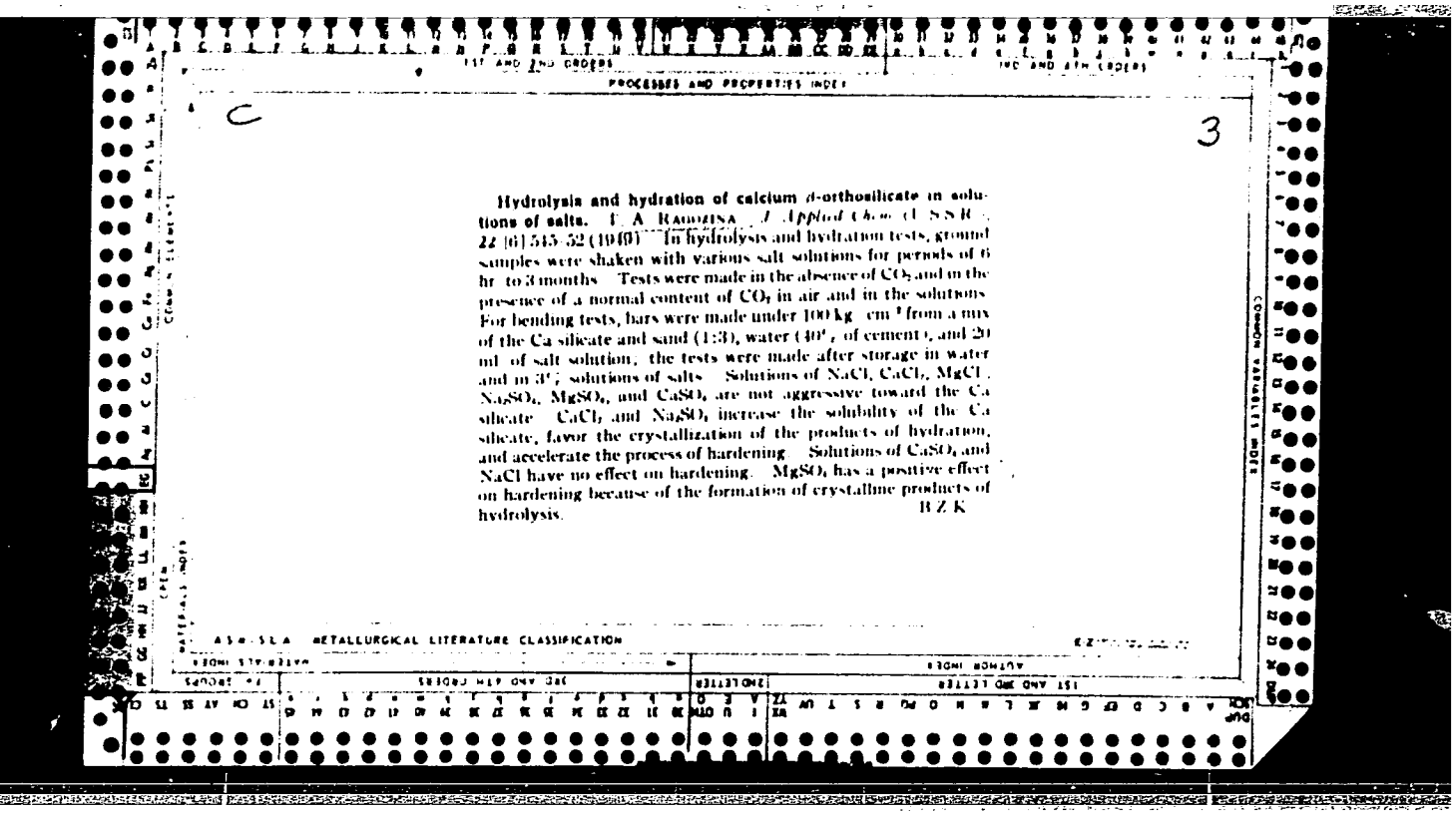


BARSOVA T.

Glikman, S. A., Barsova, T. and Zin'kova, E. "The rise in the activity of talcum as a filler for rubber mixtures," Uchen. zapiski (Sarat. gos. un-t im. Chernyshevskogo), Vol. XXI, vyp. khim., 1949, p. 6 -77, - Bibliog: 6 items

SO: U-1027, 29 Oct 52, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).



PROCESSES AND PROPERTIES INDEX

C

3

Hydrolysis and hydration of calcium *d*-orthosilicate in solutions of salts. T. A. Rabotina. *J. Applied Chem. (U.S.S.R.)*, *22* [6] 545–52 (1949). In hydrolysis and hydration tests, ground samples were shaken with various salt solutions for periods of 6 hr. to 3 months. Tests were made in the absence of CO_2 and in the presence of a normal content of CO_2 in air and in the solutions. For bending tests, bars were made under 100 kg. cm.$^{-2}$ from a mix of the Ca silicate and sand (1:3), water (40% of cement), and 20 ml. of salt solution; the tests were made after storage in water and in 3% solutions of salts. Solutions of NaCl, $CaCl_2$, $MgCl_2$, Na_2SO_4, $MgSO_4$, and $CaSO_4$ are not aggressive toward the Ca silicate. $CaCl_2$ and Na_2SO_4 increase the solubility of the Ca silicate, favor the crystallization of the products of hydration, and accelerate the process of hardening. Solutions of $CaSO_4$ and NaCl have no effect on hardening. $MgSO_4$ has a positive effect on hardening because of the formation of crystalline products of hydrolysis.

B Z K

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RAGOZINA, T.A.

Preparation of cements from the schist: $2SiO_2.Al_2O_3.5CaO$. T. A. Ragozina. *Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R.* 1953, No. 4, 41–53.—Processes taking place during calcination of a clay-lime mixt. of compn. $2SiO_2.Al_2O_3.5CaO$ at a temp. of 900–1300° and prepn. of cements from it were studied by using local kaolin and kaolin-type clays with high content of sand or alumina and local limestones. The fixation of lime was studied on two mixts. (1) rich with sand (9.5%) and little alumina and (2) sand-free, made from pure kaolin and alumina. Fluorite (2%) and B_2O_3 (0.5%) were added to stabilize β-$2CaO.SiO_2$. Calcination was made by heating to the desired temp. for 1½ hrs. and keeping at this temp. for 3 hrs. followed by quick cooling in air. Samples, not contg. B_2O_3, calcined at 1200–1300° disintegrated on cooling. Those calcined at 900–1100°, contg. 2–18% free CaO, were stable even without B_2O_3. The disintegration is explained by incomplete formation of a cryst. lattice of β-$2CaO.SiO_2$ at a temp. below 1200°. Above this temp. the liquid phase is present and crystn. is more complete. The fixation of lime is intensive in the solid phase; at 900° 65–80% and at 1150° 84–95% of lime was fixed, the process being intensified by CaF_2 and not affected by sand. At 1250° the fixation of lime was complete in all mixts. with or without B_2O_3. A big residue of SiO_2 was left after digesting the cake, calcined at 900–1250°, with *N* HCl and 5% Na_2CO_3 soln. Free Fe_2O_3 and Al_2O_3 were fixed completely at 900°. Analytical data and mineralogical calcns. indicate extensive formation of $5CaO.3Al_2O_3$ at 1100–1200° as a result of incomplete fixation of SiO_2 in (1) and excess of CaO in (2). The prepn. of silica-belite cement at lower temp. was studied on clinker made from 100 parts of clay, 182 parts limestone, and 0.5% B_2O_3 by calcination at 1200° for 3–6 hrs. Analysis shows complete fixation of CaO, incomplete of SiO_2, Al_2O_3, and TiO_2. The mixt. with low-lime content, calcined at 1200°, gave the silica-belite clinker with content of Ca monoaluminate higher than that for a mixt. satd. with lime and calcined at 1300°. Studies of cements prepd. from these clinkers have shown: (a) calcination of a lime-clay mixt. of $2SiO_2.Al_2O_3.5CaO$ at 1200–1350° gives actively setting kaolin-belite cement with tensile strength 10–25 kg./sq. cm. and compression strength 200–300 kg./sq. cm. Added $CaSO_4.2H_2O$, CaO, and $CaCl_2$ cause quick setting of such cements and cannot be used to increase their strength. Anhyd. $CaSO_4$ added up to 15% does not change the setting time and increases the initial strength. The stability of cements in sulfate soln. was high for those with low polycalcium aluminate content and decreases when its content was increased. A. Shadan

RAGOZINA, T. P.

MT

The decorative kaolin-belite cements. T. A. Ragozina and A. I. Milogradskaya. *Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R.* 1953, No. 4, 54–62.—The decorative kaolin-belite cements were prepd. from local clays, low in Fe, contg. 85% kaolin, and limestone. Two clinkers were prepd. at 1200–1300°: (1) with 100% satn., (2) with 97% satn. calcd. on fixation of CaO as $2CaO.SiO_2$, $CaO.Al_2O_3$, $2CaO.Fe_2O_3$, and $CaO.TiO_2$. Complete fixation in (1) occurred at 1300°, in (2) at 1200°. In expts. (1) was calcined at 1200–1280°, (2) at 1300–1350° for 6 hrs. followed by slow cooling. The clinkers prepd. were not homogeneous in structure and were colored, giving on grinding slightly colored cements. The chem. analysis has shown a big insol. residue of SiO_2, Al_2O_3, and TiO_2. Free-lime content in clinker was: (1) 0.0%, (2) 0.37%, making the actual fixation of CaO for (1) 102.8%, for (2) 98.5%. Microscopic study indicates the presence of β-$2CaO.SiO_2$, $CaO.Al_2O_3$, and polycalcium aluminates. Addn. of 15% $CaSO_4$, calcined at 700–800°, improves the stability of cements in sulfate soln. and mech. properties. The decrease of setting time caused by addn. of anhyd. $CaSO_4$ can be reversed by admixing of borax (0.3–0.4%) or tartaric acid (0.2–0.4%). The kaolin belite cements, contg. 15% $CaSO_4$, were sufficiently stable towards refrigeration and had compressive strength in plastic soln. (1:3) up to 200 kg./sq. cm. The color stability of cements was tested by partial submerging of samples of cement in H_2O and 0.2% soln. of sulfates. The cements were color-stable in H_2O and soln. contg. up to 2000 mg./l. $CaSO_4$ and $MgSO_4$; Na_2SO_4 soln. caused rapid change of color and ultimately the destruction of cement. A. Shadan

(1)

15-57-1-527

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 84 (USSR)

AUTHOR: Ragozina, T. A.

TITLE: The Mineral Composition of the Roasted Mixture $nSiO_2$: mAl_2O_3:2n + mCaO (K voprosu o mineralogicheskom sostave obozhzhennykh smesey $nSiO_2$:mAl_2O_3:2n + mCaO)

PERIODICAL: Dokl. AN UzSSR, 1956, Nr 1, pp 21-24.

ABSTRACT: The author has examined the roasting conditions of mixtures for obtaining alumina cements that produce the most complete conversion of Al_2O_3 to monocalcium aluminate and that prevent the formation of galena. The mineral determinations from the mixtures roasted at 1200°, 1250°, and 1350° are listed in a composite table. The optimum conditions of roasting, during which the greatest quantity of galena was formed, occur at 1200°, with a concentration of lime between 94 and 100 percent. A small addition of CaF_2, especially to mixtures containing lime, favors a decrease in the

Card 1/2

The Mineral Composition of the Roasted Mixture (Cont.)

quantity of tricalcium aluminate at 1250° to 1350°, but leads to complete combination of the lime at 1200°.

A. A. L.

Card 2/2

15-57-10-14328

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 158 (USSR)

AUTHORS: Kantsepol'skiy, I. S., Zhabitskiy, M. S., Ragozina, T. A.

TITLE: Intensifying the Hardening Process of Puzzolan Portland Cement by Using Naturally Baked Clays (Intensifikatsiya protsessa tverdeniya putstsolanovogo portlandtsementa s gliyezhem)

PERIODICAL: Izv. AN UzSSR, ser. khim. n., 1957, Nr 1, pp 33-39

ABSTRACT: Puzzolan portland cement of Uzbekistan containing 30 percent of naturally baked clays is better than portland cement in its resistance to water and sulfates. The properties of naturally baked clay as an active mineral ingredient show up very clearly during hydrothermal treatment of the puzzolan cements. Steam-treatment of puzzolan cements strongly accelerates the interaction of the naturally baked clays and the lime

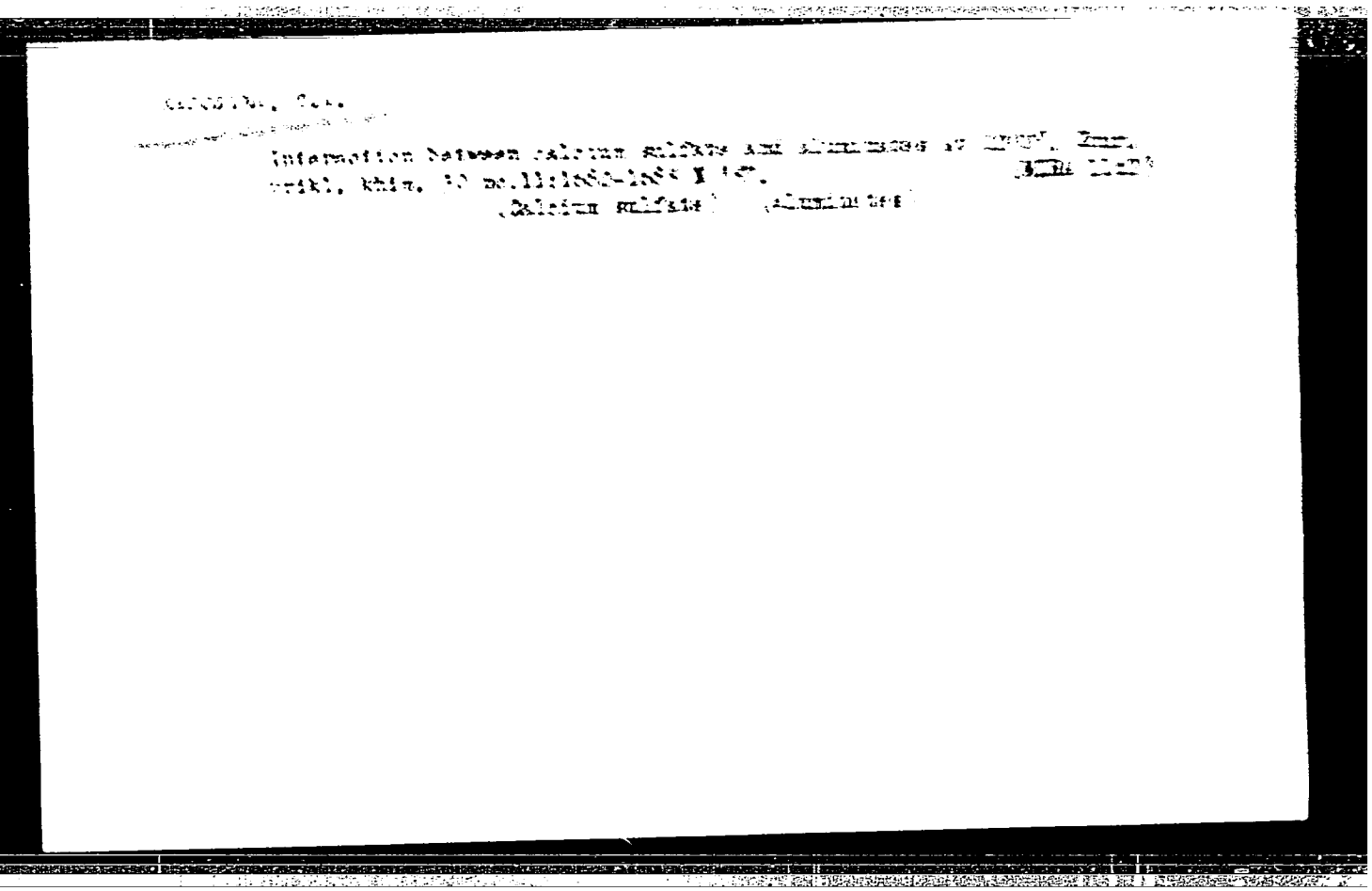
Card 1/2

Intensifying the Hardening Process of Puzzolan (Cont.)

which is separated out during hardening of the portland cement, and this reaction is favorable to a faster rate of hardening of the cement. Ordinary portland cement containing naturally baked clay, brand 400, with a short period of steam-treatment, acquires a greater resistance in one day than is provided by the technical conditions for fast-drying cement.

Card 2/2

V. P. Yeremeyev



RAGOZINA, T.A.

Fast-setting and white cements from Angren raw materials. Uzb. khim.zhur. no.6:55-60 '58. (MIRA 12:2)

1. Institut khimii AN UzSSR.
(Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.

Hydrolysis of alumina-belite cements. Uzb. khim. zhur. no.3: 59-65 '58. (MIRA 12:9)

1.Institut khimii AN UzSSR.
(Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.

Resistance of alumina-belite cements to corrosion by salts.
Uzb. khim. zhur. no. 2:79-86 '60. (MIRA 14:1)

1. Institut khimii AN UzSSR.
(Belite) (Alumina) (Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.; Prinimala uchastiye: MUKHAMEDOVA, U.

Hardening of alumina belite cements in corrosive solutions and the effect of various hydrolytic additives on the process. Kor.tsem.i mery bor'by s nei no.2:109-130 '62. (MIRA 15:11)

(Alumina cement)
(Corrosion and anticorrosives)

RAGOZINA, T.A.; GULYAMOV, M.G.; Prinimala uchastiey: MUKHAMEDOVA, U.

Penetrability of the structure of a cement brick and the penetration of Mg^{++} and SO_4^{--} ions into it. Kor.tsem.i mery bor'by s nei no.4:131:145 '62. (MIRA 15:11)
(Alumina cement)
(Salts)

RAGOZINA, T.A.; ZKHEDOV, M.A.

Effect of $CaSO_4$ on the phase composition of calcium silicates and aluminates during firing. Uzb.khim.zhur. 6 no.2:5-11 '62. (MIRA 15:7)

1. Institut khimii AN UzSSR.
(Calcium sulfate) (Calcium silicates)
(Calcium aluminates)

AKHMEDOV, M.A.; RAGOZINA, T.A.

Directing effect of calcium sulfate in mineral-forming process during clinkering. Uzb.khim.zhur. 7 no.1:23-27 '63. (MIRA 16:4)

1. Institut khimii AN UzSSR.
(Portland cement) (Calcium sulfate)

YASTREBOV, A.F.; MASTENITSA, M.A.; KOLDOMOV, M.V.; KORCLENKO, G.A.
RAGOZINA, T.T.; VILENCHIK, R.Yu.

Lung diseases of adenoviral nature in Pavlovsk District, Altai Territory. Trudy TomNIIVS 14:60-64 '63. (MIRA 17:7)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok i Altayskiy krayevoy otdel zdravookhraneniya.

[redacted], V.S.

Characteristics of the conversion of the basic forms of circulation and types of processes in June-December and the possibility of detailing forecasts for September. Trudy AANII 262:152-174 '65. (MIRA 19:1)

S/169/62/000/005/056/093
D228/D307

AUTHOR: Ragozina, V. S.

TITLE: A method of forecasting large air-temperature anomalies for the Chukotskoye Sea in October

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 43, abstract 5B288 (Tr. Arkt. i antarkt. n.-i. in-ta, 240, 1961, 153-162)

TEXT: The investigation of the conditions of formation of large positive and negative air-temperature anomalies in October for four stations (Vrangel' Island, Shmidt Cape, Vankarem, Uelen) was made in cases with a warm and a cold October (when the anomaly at the focus comprised $\pm 2^{\circ}$ and more) for 1931-1958. Anomalously warm and anomalously cold Octobers have the same frequency (according to 10 cases). The mean monthly temperature anomalies are caused not by separate sharp changes in the temperature, but by its generally increased or diminished background. Some diagnostic and prognostic relations between large monthly temperature anomalies and the fre-

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S/169/62/000/005/056/093
D228/D307

A method of forecasting ...

quency of days with G. Ya. Vangengeym's main forms of atmospheric circulation were derived. In 80% of the cases a cold October is distinguished by the prevalence of processes of the westerly form. A warm October, on the contrary, is characterized in 80% of the cases by the predominance of processes of the easterly form. Meridional circulation processes are not significant for the formation of large October anomalies. During negative and positive anomalies that are close to the norm the correlation of the westerly and easterly forms of circulation is fulfilled only in one-third of the cases in years with a cold October; in years with a warm October it is unfulfilled in all instances. Large temperature anomalies are caused by peculiarities in the atmospheric circulation's development in the period of formation and in the preceding months. The maximum divergence in the frequency of the number of days with meridional and westerly circulation forms in the months preceding October is noted in May. When the processes of meridional and easterly forms of circulation prevail in May, in October it is possible to expect with a high probability (80%) large positive

Card 2/3

A method of forecasting ...

anomalies, and large negative anomalies if the frequency of westerly circulation processes is high. 2 references. [Abstracter's note: Complete translation.]

Card 3/3

L 8726-65 EWT(1)/FCC AFETR GW S/3116/63/253/000/0077/0084
ACCESSION NR: AT4046482

AUTHOR: Ragozina, V.S.

TITLE: Peculiarities of synoptic processes causing major air temperature anomalies in October in the Chukchee Sea area

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy*, v. 253, 1963. Sbornik statey, posvyashchenny*y pamyati V. V. Frolova; V. V. Frolov; problems in the hydrometeorology of the polar regions), 77-84

TOPIC TAGS: long-range weather forecasting, weather forecasting, atmospheric temperature anomaly, meteorology, Arctic

ABSTRACT: In the autumn, the Chukchee Sea is one of the principal parts of the route along which vessels following the Northern Sea Route move. For this reason, the author has exploited data for the years 1931-1958 to determine the pattern of synoptic processes causing major temperature anomalies in October in that area. A month was considered anomalous if the sign of the anomaly was maintained over a large part of the sea and the value of the anomaly attained or exceeded ± 2C at the center. A sample of 20 anomalous (10 positive and 10 negative) months was analyzed. For each of these

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L 8726-65
ACCESSION NR: AT4046482

groups the author compiled charts of the mean monthly values of surface pressure, the mean height of the AT-500 mb surface, its anomalies, and air pressure and temperature anomalies. In addition, charts of centers of heat and cold were compiled. The positive anomalies tend to center on Wrangel Island, as shown in Fig. 1 of the Enclosure, and are associated with an easterly form of circulation. In addition, there is a characteristic development of stable blocking systems which are connected across the region of the pole by high-level ridges of the Pacific Ocean and European anticyclones. This joining occurs as a result of heat advection along the western periphery of high-level ridges. The negative anomalies (-2C or more) in October have the pattern of distribution shown in Fig. 2 of the Enclosure. In such cases the Arctic anticyclone is connected with the ridge of the Siberian anticyclone by a broad zone of high pressure which passes through the Chukchee, East Siberian and Laptev Seas. With this positioning of pressure fields there is a movement of cyclones from west to east. As a result, interlatitudinal exchange is weakened and progressive radiation cooling begins in the polar region, in contrast to radiation heating in the lower latitudes. As a result almost the entire Arctic, but especially its eastern half, has temperatures below the mean long-term values. The peculiarities of the distribution of pressure fields in the Arctic

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L 8726-65

ACCESSION NR: AT4046482

and over the northern hemisphere, caused by a westerly form of circulation, determine the development of a strong cold anticyclone in the Arctic and cyclonic activity in the middle latitudes. The movement of cyclones will be along paths from the west to east, leading to the negative temperature anomalies. Orig. art. has: 6 figures.

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, Leningrad (Arctic and Antarctic Scientific Research Institute)

SUBMITTED: 00 ENCL: 02 SUB CODE: ES

NO REF SOV: 003 OTHER: 000

Card 3/5

L 8726-65

ACCESSION NR: AT4046482

ENCLOSURE: 01

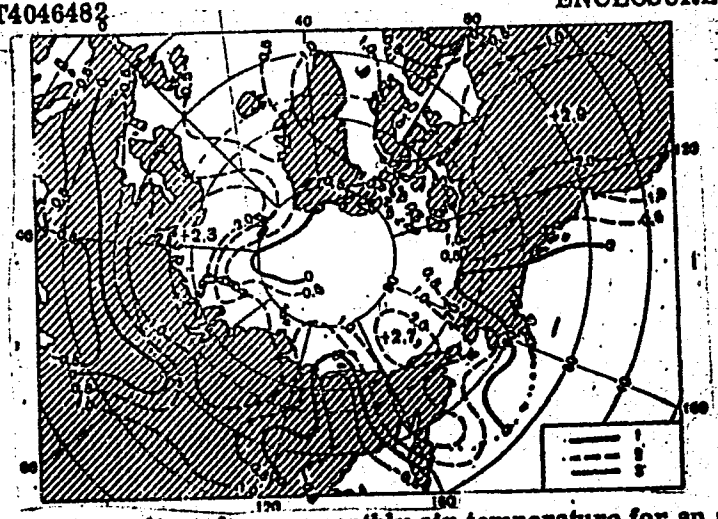

Fig. 1. Distribution of anomalies of mean monthly air temperature for an anomalously warm October. 1 - zero; 2 - positive; 3 - negative.

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L 8726-65
ACCESSION NR: AT4046482

ENCLOSURE: 02

Fig. 2. Distribution of anomalies of mean monthly air temperature for an anomalously cold October. 1 - zero; 2 - positive; 3 - negative.

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L 16633-65 EWT(1)/EWG(v) Pe-5/Pae-2 GW

ACCESSION NR: AT4048794 S/3116/63/255/000/0108/0118

AUTHOR: Ragozina, V.S.

TITLE: Peculiarities of synoptic processes in periods preceding anomalous autumns in the eastern Arctic

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy*, v. 255, 1963. Sbornik statey po voprosam dolgosrochny*kh prognozov pogody* dlya Arktiki (Collection of articles on the problems of long-range weather forecasting for the Arctic), 108-118

TOPIC TAGS: atmospheric circulation, weather forecasting, long-range weather forecasting, Arctic meteorology

ABSTRACT: Analysis of the data presented in this paper shows that the character of the synoptic processes preceding large positive and large negative air temperature anomalies in the eastern Arctic in the autumn period is basically different. In a period preceding large positive air temperature anomalies in the eastern Arctic there is a transformation of

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L 16633-65
ACCESSION NR: AT4049794

the meridional form of circulation (in May-July) to easterly (in August). The process is characterized by the stable development of a high-level warm Arctic anticyclone, displaced toward the shores of northern Canada and by the filling of the Aleutian Low. At this time there is increased intensity of easterly flow with a southern component. In these cases the movement of Arctic cyclones occurs with a large meridional component. In a period preceding large negative air temperature anomalies in the eastern Arctic there is a transformation of a westerly form of circulation (in May to July) into W + E (in August). At this time there is development of a low and cold Arctic anticyclone and the Aleutian Low and an intensification of easterly transport with a northern component. Cyclines move in a latitudinal direction from west to east. The character of the transformation of the principal forms of atmospheric circulation and the development of processes in the Arctic and adjacent regions associated with these peculiarities in the May-August period determine the formation of large air temperature anomalies in the eastern Arctic in the autumn period. The determined characteristics can be used in preparing long-range weather forecasts. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, Leningrad (Arctic and Antarctic Scientific Research Institute)

Card 2/3

L 16633-65
ACCESSION NR: AT4048794

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 003 OTHER: 000

Card 3/3

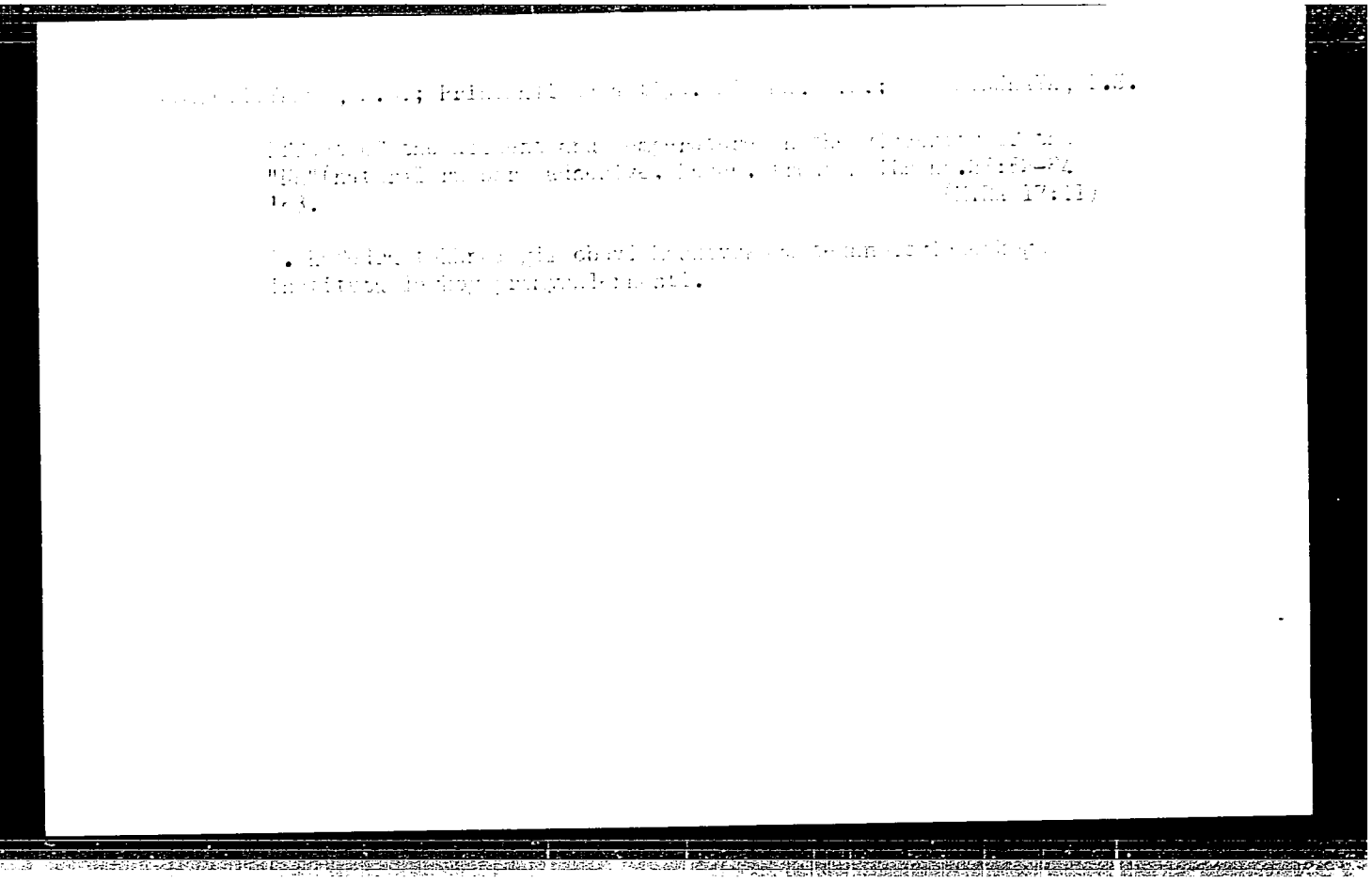
[illegible], V.A., [illegible], Ye.Ye.

Refractories for copper smelting converters. TSvet. met. 38 no.4:
31-33 Ap '65. (MIRA 18:5)

RAGOZINNIKOV, V.A.; VOROB'YEVA, K.V.

Refractory materials for calcining furnaces. Ogneupory 29 no.12: 555 '64. (MIRA 18:1)

1. Vostochnyy institut ogneuporov.



L 53939-65 EPA(s)-2/EWT(m)/EPF(n)-2/EWG(m)/T Pz-6/Pt-7/Pu-4 DS

ACCESSION NR: AP5014549 UR/0089/65/018/005/0545/0546

41
B

AUTHOR: Fradkin, G. M.; Kodyukov, V. M.; Ragozinskiy, A. I.

TITLE: "Beta-2" isotopic source of electric energy

19

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 545-546

TOPIC TAGS: electric energy source, energy source, isotopic energy source, power supply

ABSTRACT: A new radioisotope thermoelectric generator, produced by the State Committee for the Use of Atomic Energy in the USSR, is briefly described. A photograph of the device is included. Called the "Beta-2," the 5—7-watt generator serves as a power source for unmanned weather stations in remote locations which relay data on temperature, wind velocity and direction, barometric pressure, precipitation, and sunshine over distances of up to 600 kilometers. A special conversion and storage system makes it possible to produce an output voltage of 32 v and to supply various instruments with 1000-watt pulses. The radiation dose 1 meter from the surface of the 150-kg generator is about 1 roentgen/hr. This can be reduced to 10 milliroentgen/hr when the device is transported in a supplementary container. [ZL]
Orig. art. has: 1 figure.

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L 53979-65

ACCESSION NR: AP5014549 0

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE,NP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4051

Card 2/2

RAUBIN, N. N. Cand. Biolog. Sci.

Dissertation: "Interbreeding of Wheat with Couch Grass, and R-Hybrids with Wheat." Moscow State Pedagogical Inst imeni V. I. Lenin, 17 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

RAGULIN, A. A.

Jan 1947

USSR/Medicine - Food
Agriculture

"Hybrid Triticum Durum X Elymus Arenarius," A.A. Ragulin. 4 pp

"Dok Ak Nauk SSSR" Vol LV, No 3

Submitted by N.V.Tsitsin, Institute of Grain Agriculture in the Non-Black Earth Belts, Nemchinovka. Report on the work done by Tsitsin from 1943 in his search for a hardy type of wheat which he created by crossbreeding Triticum durum and Elymus arenarius.

21T89

RAGULIN, A. Ye., Candidate Tech Sci (diss) --- "A study of the process of salting anchovies in order to select the most rational system of processing them". Moscow, 1959. 14 pp (Kaliningrad Tech Inst of the Fish Industry and Economy), 150 copies (KL, No 24, 1959, 140)

RAGULIN, A.Ye., inzh.-tekhnolog.

Comparative characteristics of salting anchovies with dry salt and brines. Trudy VNIRO 35:53-69 '58. (MIRA 11:11)
(Fish, Salt) (Anchovies)

BORISOV, S.V., inzhener; RAGULIN, G.I., inzhener.

High-pressure mercury lamps with corrected chromaticity. Svetotekhnika 3 no.2:1-4 F '57. (MLRA 10:3)

1. Moskovskiy elektrolampovyy zavod.
(Electric lighting, Mercury-vapor)

PETUKHOV, B.; RAGULIN, N.

Determination of heat conductivity of aqueous solutions of monoethanolamine by the method of regular regime. Kholodil'naya Tekh. 30, No.1, 56-9 '53. (CA 47 no.20:10326 '53) (MLRA 6:3)

1. V.M.Molotov Energetics Inst., Moscow.

RAGULIN, N. F.

RAGULIN, N. F.: "The use of pressure equalization to achieve stability of liquid movement in steam-generating piping with forced movement." Min Electric Power Stations USSR. All-Union Order of Labor Red Banner Heat Engineering Sci Res Inst imeni F. E. Dzherzhinskiy. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science.)

So: Knizhnaya letopis', No. 37, 1956. Moscow.

AUTHOR: Ragulin, N.F., Engineer (Moscow Division Central Boiler and Turbine Institute).

TITLE: Pressure equalisation in the turns of a uniflow boiler. (Vyravnivaniye davleniy v vitkakh pryamotochnogo kotla.)

PERIODICAL: "Teploenergetika" (Thermal Power), 1947, Vol. 4, No. 6, pp. 21 - 25, (U.S.S.R.)

ABSTRACT: A method of equalising the pressure is proposed for reducing pulsation between turns in uniflow boilers instead of throttling, which wastes electric power. In essence the method consists in that an equalising header is connected to a system of parallel tubes at the same distance from the inlet header. The pressure is equalised between the tubes at the point of installation of the equalising header so that the two sections of the bundle of tubes can be considered separately.

Pressure pulsations occur in regions of low steam content. These pulsations of pressure cause pulsation between turns, but this does not always follow. The governing factor is the ratio of the hydraulic resistance of the economiser section to that of the evaporative section. Inter-turn pulsation cannot happen if the hydraulic resistance of the economiser section together with diaphragms is equal to or greater than the hydraulic resistance of the evaporative section. This is confirmed by experimental data obtained on test rigs and on a number of boilers. The results are plotted in a graph of the

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Pressure equalisation in the turns of a uniflow boiler. (Cont.)

relative amplitude of pulsation as a function of the ratio of the resistances. The term relative amplitude of pulsation means the ratio of the amplitude of oscillation of the flow to the mean flow at the inlet to the tube.

Investigation of the influence of an equalising header on the inter-turn pulsation was carried out on a three-coil model of a uniflow boiler heated by steam. The internal diameter of the tubes was 10 mm, the length of each turn was 55.6 metres, the experimental installation was fitted with five equalising headers made of the same piping as the turns. Each of them could be closed by valves. Measurements could be made of the flows and temperature of water at the inlet to the coils, the steam content and flows at the exit from the coils and the pressure and temperature along the length of the coils. In carrying out the tests the equaliser tubes were turned off, pulsating conditions were established and then the equalising headers were connected. Only one header worked at a time.

Comparison of conditions before and after connection of the header gave a clear idea of its effect on pulsation. The experiments were mainly made at a pressure of 100 atm. The results of the tests are presented on a graph and show that the ratio of the hydraulic resistance of the economiser section to that of the evaporative section really is the criterion which governs the intensity of pulsation and also the boundary of the region in which pulsation cannot occur. The tests showed the presence of oscillations in the heat absorption of

Pressure equalisation in the turns of a uniflow boiler. (Cont.)

turns during pulsation which points to the auto-oscillatory character of inter-turn pulsation.

The influence of the equalising header on the hydro-dynamic characteristic and thermal non-uniformity of operation of turns is considered. Calculated hydro-dynamic characteristics for a boiler type CNN-200/140 are plotted. The distribution of static pressure over the length of the turns is also plotted for different values of flow in the tube with allowance for reduction of pressure due to friction with uniform distribution of the thermal load. It is shown how the pressure can vary between turns. As a result of connecting an equalising header these pressures are equalised because of flow of medium from turns with high pressure and small flow to turns with lower pressure and higher flow. The influence of an equalising header is considered theoretically and calculations are made for the pressure distribution over the length of the radiation section of a boiler type 51-CN-220/100. The curves which are plotted show that flow of liquid into the equalising header is to be expected from turns of high heat intake.

By way of example calculations are given applicable to the lower radiation part of a boiler type 51-CN-220/100 for various positions of the equalising header. The results of the calculations are presented graphically giving on the ordinate the ratio of the difference of the heat content of

Pressure equalisation in the turns of a uniflow boiler. (Cont.)

turns with maximum and minimum heat intake after installation of an equalising header to the difference of heat content in the same turns before its installation. The length of the turn is plotted on the abscissa. The best place at which to install the equalising header is shown.

The experimental data and also tests carried out on a boiler type 69YC qualitatively confirm the results of the theoretical calculation.

The influence of the diameter of the equalising header on its effectiveness could not be investigated but it is probably sufficient to make it twice the diameter of the tubes to which it is connected. The unions between the tubes and the header should be made as large as possible.

Equalising headers should be more widely used in uniflow boilers.

5 figures, no literature references.

Card 4/4

RAGULIN, N.F.

Increasing the reliability of water walls with natural circulation. Nauch.dokl.vys.shkoly; energ. no.4:175-184 '59. (MIRA 12:5)
(Boilers)

KRASNOV, A.I., inzh.; RAGULIN, N.F., inzh.

Use of breather collectors in once-through boiler manufacture.
Energomashinostroenie 4 no.2:1-5 F '58. (MIRA 11:4)
(Boilers)

AUTHOR: Ragulin, N.F., Engineer 96-58-2-10/23

TITLE: Measurement of the Steam Content of a Flow (Izmereniye parosoderzhaniya potoka)

PERIODICAL: Teploenergetika, 1958, No 2, pp 51 - 55 (USSR)

ABSTRACT: Available methods of measuring the steam content of a flow are cumbersome or inaccurate. This article describes moisture-content meters developed for use when the rate of flow of steam/water mixture is not known. The first moisture-content meter contains a separator and is based on separating the steam/water mixture and measuring the dynamic heads of the steam/water mixture and the dry saturated steam. The arrangement of the instrument is illustrated schematically in Fig.1. It includes a film-type separator and an automatic hydraulic shutter. The possibility of measuring the steam content and the flow of steam/water mixture by means of two pressure-tubes was demonstrated theoretically before the equipment was tested. The measurement is only possible when the steam/water mixture moves at high speed with practically no liquid film on the tube walls. Tests show that the speed should be at least three times the critical speed calculated from L.K. Ramzin's semi-empirical formula, which is given.

Expressions are written for the dynamic heads for dry saturated

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steam and for steam/water mixtures. An expression is then derived for the steam content by weight. A simplified formula is applicable near the triple point; this formula corresponds to a straight line passing through the origin of the graph. Over a wide range of pressure up to 70 atm., the full and the simplified formula give very similar results. An equation is stated for use in selecting the dimensions of the hydraulic shutter and steam line.

The second moisture-meter circuit contains no separator. It is based on the principle that a pressure tube and throttling diaphragm are installed in the pipe line through which the flow is moving. A flow equation is derived on the assumption that the water is uniformly distributed over the tube section and that the throttle measures only the flow of dry saturated steam. An expression is then derived for the steam content of the flow, which is a function of the pressure and the ratio of the heads measured by the instrument.

The moisture meters were tested on a rig illustrated diagrammatically in Fig.3. The steam/water mixture was prepared by evaporating water in steam coils. The dried steam and the water from the separator passed through separate tubes to coolers and

Card2/4 measuring tanks. The water level in the hydraulic shutter was

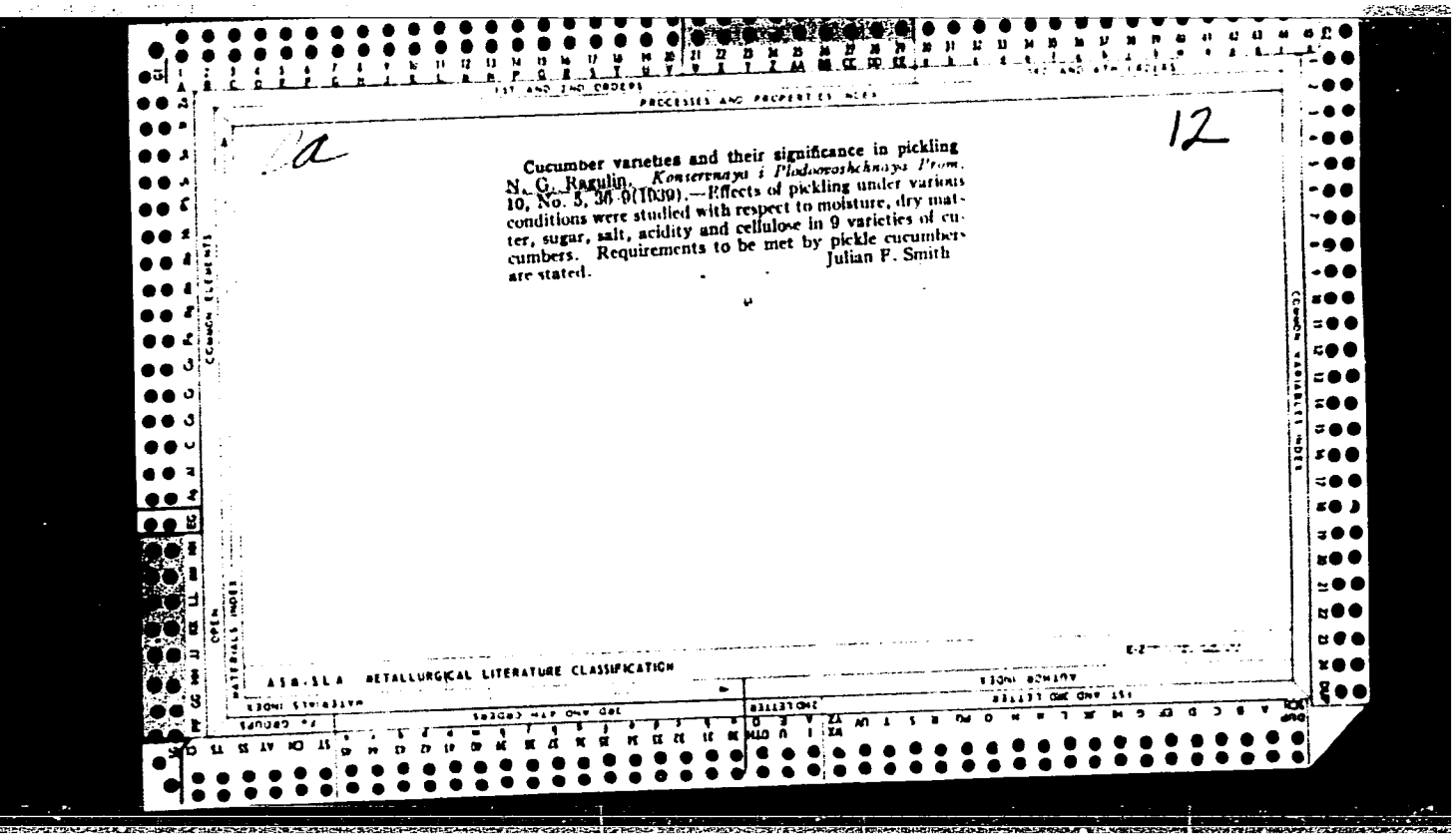
controlled by the differential manometer illustrated in Fig.1. The experimental procedure is described and experimental results for the two kinds of meter are given in Figs. 4 and 5. The dispersion of the experimental points did not exceed 3%, showing that the tube diameter and the pressure are not critical. In the case considered, the accuracy of determination of the steam content depended on the effectiveness of separation of steam/water mixture in the separator. Therefore, special tests were made by the salt method, to determine the efficiencies of the two meters under operating conditions. Both were found to be very efficient. It was also decided to verify experimentally the relationship between the water level in the shutter and the reading of the differential manometer. The method of controlling the water level in the shutter was shown to be reliable. The results of tests to verify the non-separating type of moisture meter are given in Fig.6. The dispersion of experimental points is low.

Since the tube diameter has practically no influence on the operation of the moisture meters, it may be supposed that it is also unimportant in the non-separating type of water meter. Theoretical calculations of steam quality given in the table are

in satisfactory agreement with test results for steam contents greater than about 0.5. The theoretical formula is not valid for steam contents lower than this. The non-separating moisture meter is the simpler type. When measuring steam contents under transient conditions, the presence of a separator and hydraulic shutter can cause appreciable distortions. Both types of meter are suitable for steam content measurements if the rate of flow of steam/water mixture is unknown. When the rate is known, simpler methods may be used. The steam content by weight and the pressure drop are graphed in relation to the square of the flow for different pressures in Figs. 7 and 8. There are 8 figures.

ASSOCIATION: MO TsKTI

AVAILABLE: Library of Congress
Card4/4 1. Flows-Steam content-Measurement



12a

Cucumber varieties and their significance in pickling. N. G. Ragulin. *Konservnaya i Plodoovoshchnaya Prom.* 10, No. 5, 36-9(1939).—Effects of pickling under various conditions were studied with respect to moisture, dry matter, sugar, salt, acidity and cellulose in 9 varieties of cucumbers. Requirements to be met by pickle cucumbers are stated. Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

25(1) PHASE I BOOK EXPLOITATION SOV/1790

Ragulin, Vasiliy Vasil'yevich

Proizvodstvo pnevmaticheskikh shin (Manufacture of Pneumatic Tires) Moscow, Goskhimizdat, 1958. 355 p. Errata slip inserted. 4,000 copies printed.

Ed.: L.B. Tomchin; Tech. Ed.: Ye. G. Shpak.

PURPOSE: This book is intended for workers of the tire manufacturing industry attending factory sponsored courses. It may also serve as a textbook for students at tekhnikums.

COVERAGE: This book contains basic information on the manufacture of tires (automobile, agricultural machinery, mobile construction equipment, motorcycle, and bicycle). It discusses the raw materials used and the various intermediate or semifinished products of the industry. Processing techniques and equipment used in the manufacture of automobile and bicycle tires are discussed in detail. Quality control and safety precautions are also treated. The author thanks Engineer A.G. Yefimov for his assistance. There are 15 Soviet references.

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TABLE OF CONTENTS:

Manufacture of Pneumatic Tires SOV/1790

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Card 11/11

RAGULIN, Vasiliy Vasil'yevich, TOMCHIN, L.B., red., SHPAK, Ye.G. tekhn.red.

[Manufacture of rubber tires] Proizvodstvo pnevmaticheskikh shin. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1958. 355 p. (MIRA 11:9)

(Automobiles--Tires)

RAGULIN, V.V.; KONDRAT'YEVA, T.A., red.; CHIZHEVSKIY, E.M., tekhn. red.

[Technology of rubber] Tekhnologiia reziny; uchebnoe posobie dlia studentov zaochnogo obucheniia (k uchebnomu planu, utverzhdennomu 30 fevralia 1960 goda). Moskva, Rosvuzizdat, 1963. 158 p. (MIRA 17:1)

RAGULINA, A.N.

Condition of the cardiovascular system in hepatocholecystitis in children. Vrach. delo no.4:371-373 Ap '59. (MIRA 12:7)

1. Kafedra pediatrii (zav. - prof. E.G. Gorodetskaya) sanitarno-gigiyenicheskogo i stomatologicheskogo fakul'tetov Kiyevskogo meditsinskogo instituta.
(LIVER--DISEASES) (GALL BLADDER--DISEASES)
(CARDIOVASCULAR SYSTEM)

BOCHKAREV, L.M.; RAGULINA, A.T.

Nodulizing oxidized nickel ores for shaft furnace smelting.
Sbor. nauch. trud. Gintsvetmeta no.18:259-274 '61.
(MIRA 16:7)

(Nickel ores) (Ore dressing)

REZNIK, I.D., kand. tekhn. nauk; TARKHOV, N.G., inzh.; RAGULINA, A.T., inzh.

Smelting nickel agglomerate in an oxygen-enriched air blast.
Kislorod 10 no.5:6-14 '57. (MIRA 11:4)
(Nickel--Metallurgy)

SMIRNOV, M.P., kand. tekhn. nauk; BIBENINA, G.A.; TARKHOV, N.G.; RAGULINA, A.T.

Developing a continuous method of bismuth removal from lead. Sbor. nauch. trud. Gintsvetmeta no.23:217-234 '65. (MIRA 18:12)

BOCHKAREV, L.M.; RAGULINA, A.T.; SERPOV, V.I.; CHERMAK, L.L.; SHERMAN, B.P.

Pilot plant testing of the smelting of oxidized nickel ores with a blow containing up to 45 percent oxygen. TSvet. met. 33 no.7:23-28 Jl '60. (MIRA 13:7)
(Nickel--Metallurgy) (Oxygen--Industrial applications)

BOCHKAREV, L.M.; RAGULINA, A.T.; TUSNOVA, N.V.; KHARITONOVA, G.P.

Pelletizing nickel ores for shaft furnace smelting. TSvet. met. 33 no.1:77-78 Ja '60. (MIRA 13:5)
(Nickel--Metallurgy)

KHAGUNA, A. T.

67-12-2/12

AUTHORS: Reznik, I. D., Candidate of **Technical Sciences**, Tarkhov, M. G., Engineer, Ragulina, ... T., Engineer.

TITLE: The Smelting of a Nickel Agglomerate With an Oxygen-**enriched** Blast (Plavka nikelevogo aglomerata na dut'ye, obogashchennom kislorodom).

PERIODICAL: Kislorod, 1957, Nr 5, pp. 6 - 14 (USSR).

ABSTRACT: The shaft-furnace smelting of oxidized nickel ores is characterized by the low productivity of the shaft-furnaces, the great consumption of coke and the low coefficient of the utilization of heat. With present smelting conditions the consumption of coke is 30-35% of the weight of the melted material and almost 50% of the prime cost of nickel. The reduction of the coke consumption and the simultaneous increase of the productivity of shaft-furnaces can be reached by a preheating of the blast, an increased addition of air and a more complete combustion of coke. The authors studied the possibilities of using a blast enriched with oxygen. Experimental meltings were carried out according to the Gintsvet-method in the Bronze-Brass Works in Moscow. The project of the experimental plant was carried out by "Gipronikel". The vaporization station was projected by "Giprokislorod". Consultants were: A. A. Tseydler, G. Ya. Leyzerovich, V. V. Kondakov, I. M. Rafalovich. Conclusions: 1. - Ordinary shaft-furnaces for nickel smelting can be used for a smel-

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The Smelting of a Nickel-Agglomerate With an Oxygen-enriched Blast. 67-12-2/12

ting with a blast which is enriched with oxygen up to 35°/o without any essential changes of their construction. 2. - In the smelting with the blast, enriched with oxygen up to 31-35°/o, the consumption of coke dropped to 18-23°/o. The savings of coke were reached became it was subjected to a more complete combustion to carbon dioxide. Also the drop of temperature as well as of the relative quantity of waste gases and water contributed to the cooling of caissons. 3. - The enrichment of the blast with oxygen increased the specific fused mass (proplav) of the agglomerate. At a content of oxygen of 31°/o in the blast the fused mass amounted to 131°//, compared with the fused mass with air blowing, with 39°/o of oxygen it amounted to 177°/o. This was dependent on the more intensive combustion of coke and the decrease of its specific consumption. The values obtained with 39°/o of oxygen can not be regarded as being very exact, because of organisatory difficulties in the raw material during smelting and because of the periodic scaffolding of the charge. 4. - The increase of the fused mass and the reduction of the consumption of coke had no essential influence on the loss of nickel with the slags. The extraction of nickel in matte (v shteyn) was 75-76°/o on all conditions. 5. - The smelting with the oxygen blower was characterized by the drop of the signition point of the combustion of coke in the furnace as well as by the drop of the

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temperature of waste gases. In the case of uninterrupted operation the temperature of the waste gases was 100°C and less; the temperature of the slag rose to 1400°C. The conditions of operating the furnaces became better. The yield of circulating products decreased to almost half of their values and was 9,6% instead of 18,1%. 6. - In the smelting with an oxygen blast of up to 39% oxygen the nickel content in matte increased from 18,1 to 21,4% and the content of cobalt increased from 0,41 to 0,57%. The content of sulfur decreased from 16,3-7,7%. The composition of the slag remained almost unchanged and only the content of magnetite decreased from 3,3 to 1,4%. The experimental smelting showed essential advantages in the use of the blast with oxygen. - Following the results obtained the decision was made to carry out industrial experiments in the " Yuzhuralnikel'" combined works. The oxygen station erected and put to work in 1956, called KT-1000, made it possible to carry on the experiments on industrial conditions. The experiments showed that a small enrichment of the blast with oxygen will be more effective with industrial plants than with small furnaces. The usefulness of the use of oxygen in shaft meltings is, at present, mainly determined by economic reasons. Approximate calculations showed that an enrichment of the blast with 25-26% of oxygen will bring about savings of prime cost due to smaller coke consumption, with a current cost of 14 Kopekes per

The Smelting of a Nickel-Agglomerate With an Oxygen-enriched Blast. 67-12-2/12

1 kWh. The carrying out of the industrial experiments will make it possible to solve the question, which of the methods is more economic and more useful for the smelting - the heating of the blast or an enrichment with oxygen.
There are 4 figures, 7 tables, and 1 Slavic reference.

AVAILABLE: Library of Congress.

1. Metallurgy 2. Furnaces-Smelting 3. Air blast-Effects

Card 4/4

S/137/63/000/001/002/019
A006/A101

AUTHORS: Bochkarev, L. M., Ragulina, A. T.

TITLE: Rounding-off oxidized nickel ores for shaft-furnace smelting

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 7, abstract 1G47 ("Sb. nauchn. tr. Gos. n.-i. in-t tsvetn. met.", 1961, no. 18, 259 - 274)

TEXT: The rounding-off process was conducted for the purpose of finding a method producing high-quality charges. To obtain rounded-off lumps of satisfactory crushing strength (> 5 kg) and dumping resistance (> 5 kg) the material supplied for rounding-off should be of ≤1 mm size. Rounded-off lumps can be obtained from shaft-furnace heat charges, with or without fuel. The size of the rounded-off lumps can be regulated by changing the moisture of the charge. To obtain rounded-off lumps, resistant at 500°C, it is sufficient to eliminate the hygroscopic moisture contained in same. Rounded-off lumps, resistant at room temperature, are produced by adding 5% alabaster to the ore. Coking does not increase the resistance of the rounded-off lumps. Carbonizing assures the pro-

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S/137/63/000/001/002/019
A006/A101

Rounding-off oxidized nickel ores for...

duction of rounded-off lumps whose strength makes them suitable for shaft furnace smelting. The crushing resistance of the lumps decreases with higher temperatures (from 600 to 1,100°C), remaining sufficient for shaft-furnace smelting; the composition of the charge has a low effect upon the strength of the rounded-off lumps. The author mentions a system of preparing the ore for shaft-furnace smelting by rounding-off. See also RZhMet, 1960, no. 6, 12231.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

OVSYANNIKOV, N.A.; SOLENKO, V.A.; RAGULINA, L.V.

Improve the economic indices of the work of canning plants. Kons. i ov. prom. 18 no.12:26-28 D '63. (MIRA 17:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.

DEKHANOV, N.M., inzh., otv. red.; KRAVCHENKO, V.A., inzh., zames. otv. red.; RAGULINA, R.I., inzh., red.; YIM, A.P., kand. tekhn. nauk, red.; GASIK, M.I., assisten, red.; ZEL'DIN, V.S., inzh., red.; SAKHAROV, R.S., red.; BELIKOV, Yu.V., inzh., red.; KOCHERGA, N.T., ved. red.; SYCHUGOV, V.G., tekhn. red.

[Development of the iron alloy industry in the U.S.S.R.] Razvitie ferrosplavnoi promyshlennosti SSSR. Kiev, Gos. izd-vo tekhn. lit-ry, USSR, 1961. 243 p. (MIRA 15:4)

1. Ukraine. Gosudarstvennyy nauchno-tekhnicheskiy komitet. Institut tekhnicheskoy informatsii. 2. Zaporozhskiy zavod ferrosplavov (for Dekhanov, Kravchenko, Ragulina). 3. Dnepropetrovskiy metallurgicheskiy institut (for Gasik, Belikov). (Iron industry)

GASIK, Mikhail Ivanovich, kand. tekhn. nauk, dots.; L'VOVA, Ol'ga Konstantinovna, inzh.; RAGULINA, Raisa Ivanovna, inzh.; ALIVOYVODICH, Miro Khristoforovich, inzh.; KHITRIK, S.I., prof., doktor tekhn. nauk, nauchn. red.

[Manufacture and operation of continuously self-annealing electrodes and anodes] Proizvodstvo i ekspluatatsiia neprerynykh samoobzhigaiushchikhsia elektrodov i anodov. Moskva, Metallurgiia, 1965. 254 p. (MIRA 18:5)

ACC NR: AM6010193 Monograph UR/

Ragul'skis, Kazimeras Mikolo; Vitkus, Ionas Iono; Ragul'skene, Vida Leono

Self-synchronization of mechanical systems. [pt] 1: Self-synchronizing and vibro- percussive systems (Samosinkhronizatsiya mekhanicheskikh sistem. [ch.] 1: Samosinkhronnyye i vibroudarnyye sistemy) Vilnyus, Izd-vo "Mintis", 1965. 185 p. illus., biblio. (At head of title: Akademiya nauk Litovskoy SSR. Institut energetiki i elektrotekhniki) 1400 copies printed.

TOPIC TAGS: mechanical engineering, vibration theory, vibration analysis, mechanical vibration, self synchronizing mechanical system, vibropercussive mechanical system

PURPOSE AND COVERAGE: The results of investigations of the dynamics and stability of self-synchronizing and vibropercussive systems are presented. Principles of the theory of self-synchronizing systems and the synthesis of such systems in accordance with given dynamic characteristics are discussed. Analytic relationships for calculating their steady-state modes of motion, existence conditions, and stability, are presented as well as equations of small oscillations; also practical systems are solved. A number of new results

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ACC NR: AM6010193

connected with the dynamics and stability of vibropercussive systems are obtained, and many one- and two-mass vibropercussive systems are investigated. The analytic results obtained here were confirmed experimentally (in the majority of cases), and with the aid of computers. For the most part, only the results of the personal investigations of the authors are given. This book is intended for scientists and engineers.

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ACC NR: AM6010193

SUB CODE: 26/ SUBM DATE: 03Dec65/ ORIG REF: 415/ OTH REF: 055/

Card 3/3

RAGUL'SKENE, V.L. [Ragulskiene, V.]

Dynamics and stability of a pulsed vibratory-percussion system with two degrees of freedom. Trudy AN Lit. SSR. Ser.B no.1:137-142 '65. (MIRA 18:7)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

RAGUL'SKENE, V.L. [Ragulskiene, V.]; RAGUL'SKIS, K.M. [Ragulskis, K.]

Theory of vibratory percussion machines. Trudy AN Lit. SSR Ser. B no.3:113-119 '63. (MIRA 18:3)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

L 52746-65

ACCESSION NR: AP5009173 UR/0236/65/000/001/0137/0148

18
16
B

AUTHOR: Ragulskiene, V. (Ragul'skenye, V.L.)

TITLE: Dynamics and stability of a pulsed vibro-impact system with two degrees of freedom

SOURCE: AN LitSSR Trudy. Seriya B. Fiziko-matematicheskiye, khimicheskiye, geologicheskiye i tekhnicheskiye nauki, no. 1, 1965, 137-148

TOPIC TAGS: pulsed vibro-impact system, vibro-impact system dynamics, vibro-impact system stability, automatic control system, periodic motion

ABSTRACT: The author has investigated the strongly nonlinear, dynamic, fourth order system consisting of two masses in which one of the masses is connected elastically to a fixed support while the second, freely moving along a straight line, collides with the first mass following the pulsed action of an external force. The differential equations of the motion between the instants of collision is given by

$$\left.\begin{aligned} m_1\frac{d^2x_1}{dt^2}+c_1x_1=0,\\ m_2\frac{d^2x_2}{dt^2}=F(t)=F\sum_{k=0}^{\infty}\delta(t-kT), \end{aligned}\right\} \quad (1)$$

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where m_1 and m_2 are the respective masses, x_1 and x_2 = displacements from the position of static equilibrium of m_1 of the impact surfaces of the masses m_1 and m_2, respectively, c_1 = spring coefficient, F = const.

$$F\int_{kT-0}^{kT+0}\delta(t-kT)\,dt=\sigma, \qquad (2)$$

and σ is the impulse of the external force. Formulas are derived for the free vibro-impact conditions of motion taking into account the constant component of the external force, and for the exact calculation of the transient vibro-impact processes (for increasing and decreasing times and conditions near the n-fold impact periodic motion). The author also carries out the first known determinations of the n-fold vibro-impact periodic motion conditions and discusses their stability. An approximate method is proposed for the evaluation of transients from both time directions using the fact (noticed by the author) that near n-fold vibro-impact periodic motions the difference between the motion parameters of the two masses is quite small during the interval of time following each second impact. The results are applicable to certain vibro-impulse systems of automatically controlled metal-cutting stands, and the like. Orig. art. has: 70 formulas.

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L 52746-65

ACCESSION NR: AP5009173

ASSOCIATION: Institut energetiki i elektrotekhniki Akademii nauk Litovskoy SSR (Institute of Power and Electrical Engineering, Academy of Sciences of the Lithuanian SSR)

SUBMITTED: 27May64 ENCL: 00 SUB CODE: ME

NO REF SOV: 005 OTHER: 000

Card 3/3

RAGUL'SKIS, Kazimeras [Ragulskis, Kazimieras]; PETRAUSKAS, V., red.

[Mechanisms on a vibrating base; problems of dynamics and stability] Mekhanizmy na vibriruiushchem osnovanii; voprosy dinamiki i ustroichivosti. Kaunas, Akad. nauk Litovskoi SSR, 1963. 231 p. (MIRA 16:6)
(Mechanisms--Vibration)

RAGUTIS, K.

Lever and cam drive with a rectilinear cam. In Russian.

p. 87(Lietuvos TSR Mokslu Akademija. Fizikos-technikos institutas. Darbai. Vol. 2, 1956, Vilnius, Lithuania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERII B. No. 2, 1958

Ragulskis, K. Drawing cam mechanisms with cams of minimum dimensions. In Russian. p. 149.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIIA B. No. 2, 1958

Ragulskis, K. Calculations of dimensions of the cam mechanisms. In Russian. p. 157.

Monthly list of East European Accessions (EEAI) LC. Vol. 8, No. 2, February 1959, Unclass.

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIIA B. No. 3, 1958

Ragulskis, K. Use of the properties of a four-link crank mechanism in designing some mechanisms. In Russian. p. 237.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

RAGULISKIS, K.M. [Ragulskis, K.]

Simplification of the equations of the dynamics of mechanisms. Trudy AN Lit. SSSR. Ser. B no. 1:125-129 '63.

Dynamics and stability of the mechanisms on a vibrating foundation in the case of combined friction. Report No. 1: Simplified equation of dynamics and the periodic movement. Ibid.:131-138

Multiple automatic synchronization of mechanical vibrators. Ibid.:139-143 (MIRA 17:5)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

KAVOLELIS, A.K.; RAGUL'SKIS, K.M. [Ragulskis, K.]

Problems in the dynamics of a rotating system with a dynamic centrifugal-inertia type connection. Report No.1: Study of steady motion conditions. Trudy AN Lit. SSR. Ser.B no.1:165-173 '65. (MIRA 18:7)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

KAVOLELIS, A.K.; RAGUL'SKIS, K.M. [Ragulskis, K.]

Problems in the dynamics of a rotating system with a dynamic centrifugal-inertia type connection. Report No.2: Study of minor torsional vibrations according to linear approximation. Trudy AN Lit. SSR. Ser.B no.1:175-184 '65. (MIRA 18:7)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

[illegible], F.A. [illegible]

Heteropolymolybdic [illegible] and their stability. Trudy [illegible] Lit. [illegible] Ser. B [illegible] (MIRA 14:3)

[illegible] Institut [illegible] Akademii nauk Latviyskoy SSR.

RAGUL'SKIS, V.L. [Ragulskiene, L.]; [illegible]'SKIS, K.M. [Ragulskis, K.]

Theory of vibratory percussion machines. Trudy AN Lit. SSR Ser. B no.3:113-119 '63. (MIRA 18:3)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

ACC NR: AM6010193 Monograph UR/

Ragul'skis, Kazimeras Mikolo; Vitkus, Ionas Iono; Ragul'skene, Vida Leono

Self-synchronization of mechanical systems. [pt] 1: Self-synchronizing and vibro- percussive systems (Samosinkhronizatsiya mekhanicheskikh sistem. [ch.] 1: Samosinkhronnyye i vibroudarnyye sistemy) Vilnyus, Izd-vo "Mintis", 1965. 185 p. illus., biblio. (At head of title: Akademiya nauk Litovskoy SSR. Institut energetiki i elektrotekhniki) 1400 copies printed.

TOPIC TAGS: mechanical engineering, vibration theory, vibration analysis, mechanical vibration, self synchronizing mechanical system, vibropercussive mechanical system

PURPOSE AND COVERAGE: The results of investigations of the dynamics and stability of self-synchronizing and vibropercussive systems are presented. Principles of the theory of self-synchronizing systems and the synthesis of such systems in accordance with given dynamic characteristics are discussed. Analytic relationships for calculating their steady-state modes of motion, existence conditions, and stability, are presented as well as equations of small oscillations; also practical systems are solved. A number of new results

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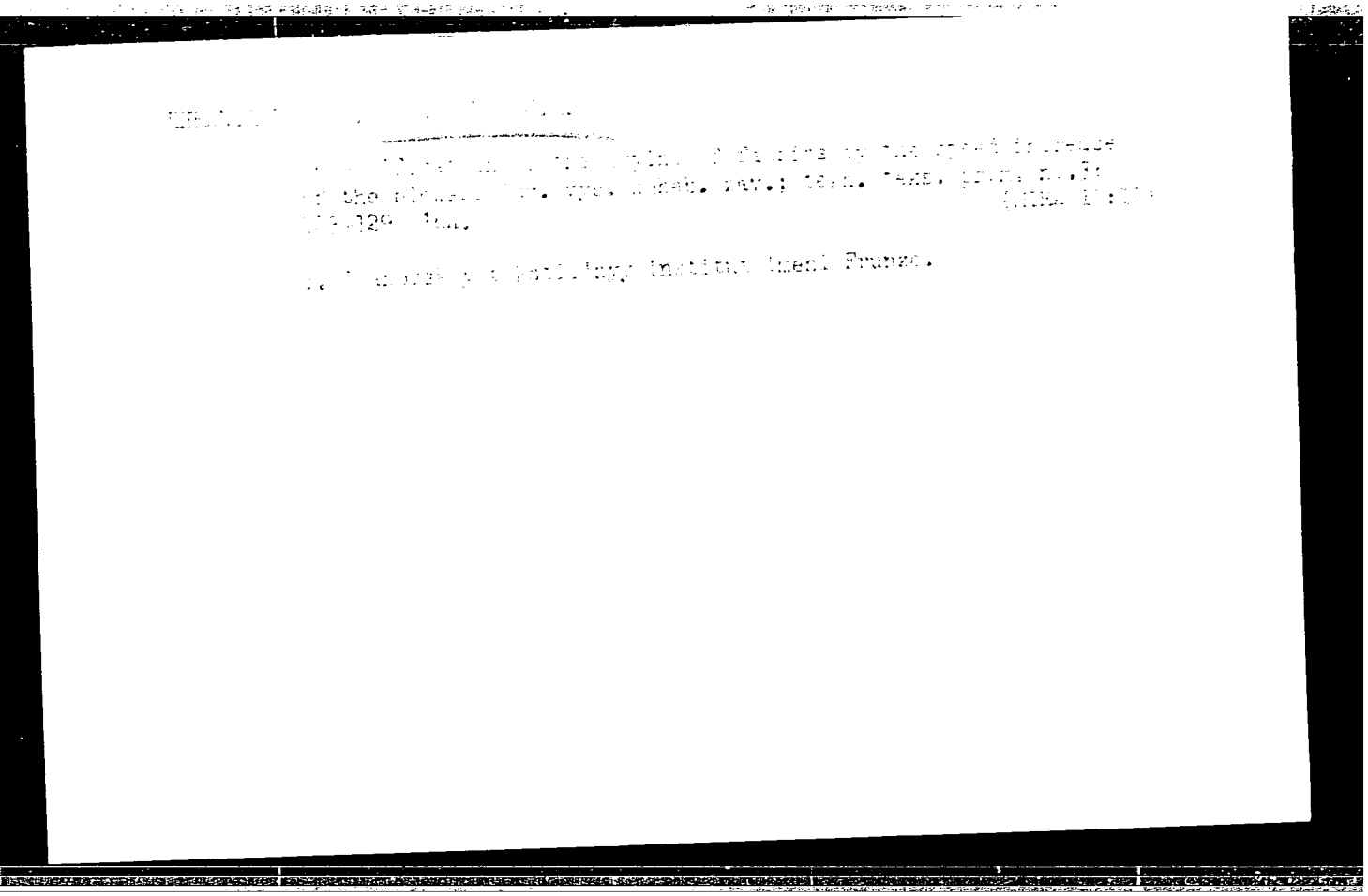
ACC NR: AM6010193

connected with the dynamics and stability of vibropercussive systems are obtained, and many one- and two-mass vibropercussive systems are investigated. The analytic results obtained here were confirmed experimentally (in the majority of cases), and with the aid of computers. For the most part, only the results of the personal investigations of the authors are given. This book is intended for scientists and engineers.

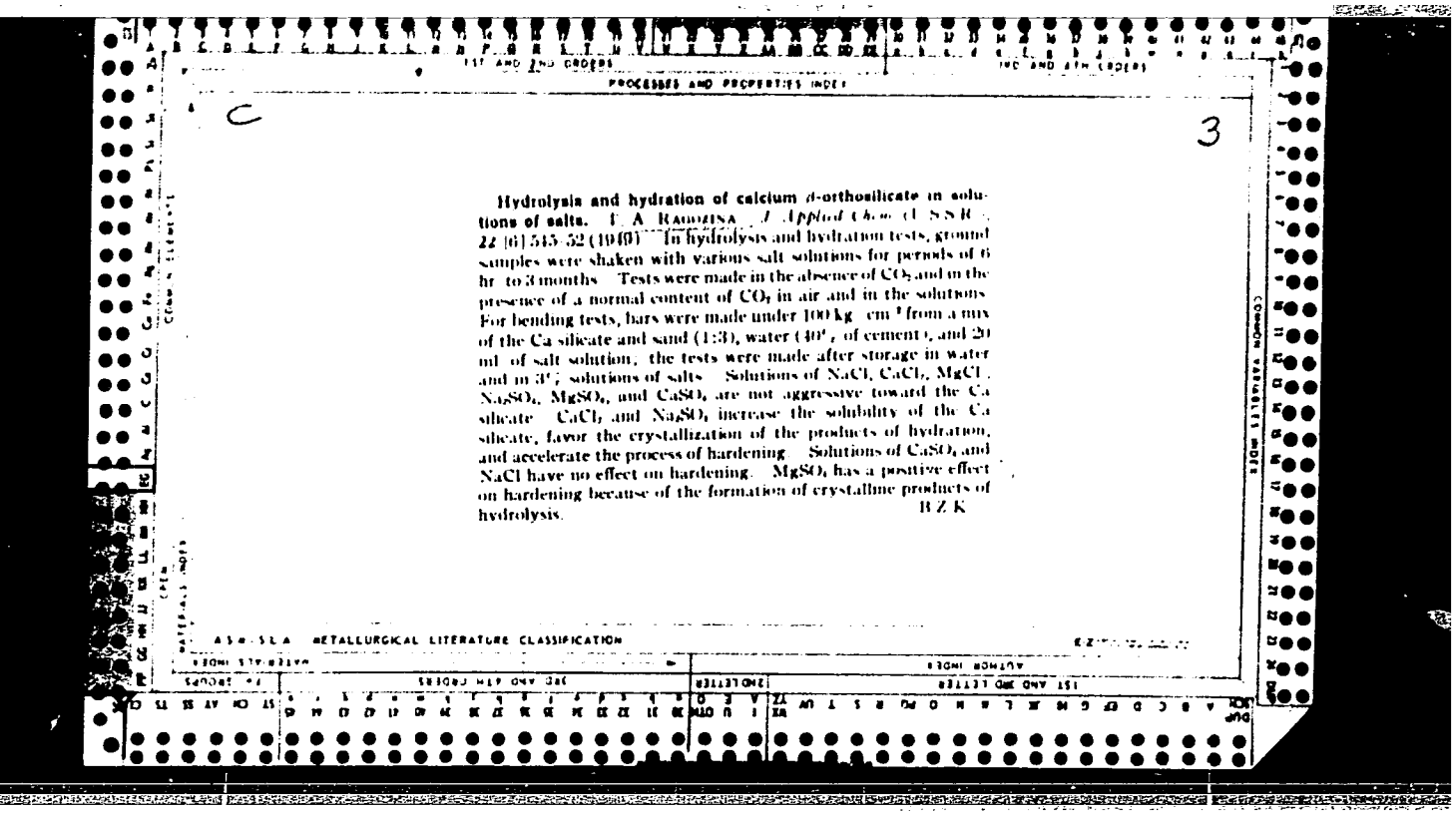
TABLE OF CONTENTS: [abridged]:



BARSOVA T.

Glikman, S. A., Barsova, T. and Zin'kova, E. "The rise in the activity of talcum as a filler for rubber mixtures," Uchen. zapiski (Sarat. gos. un-t im. Chernyshevskogo), Vol. XXI, vyp. khim., 1949, p. 6 -77, Bibliog: 6 items

SO: U-1027, 29 Oct 52, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).



PROCESSES AND PROPERTIES INDEX

C

3

Hydrolysis and hydration of calcium *d*-orthosilicate in solutions of salts. T. A. Rabotina. *J. Applied Chem. (U.S.S.R.)*, *22* [6] 545–52 (1949). In hydrolysis and hydration tests, ground samples were shaken with various salt solutions for periods of 6 hr. to 3 months. Tests were made in the absence of CO_2 and in the presence of a normal content of CO_2 in air and in the solutions. For bending tests, bars were made under 100 kg. cm.$^{-2}$ from a mix of the Ca silicate and sand (1:3), water (40% of cement), and 20 ml. of salt solution; the tests were made after storage in water and in 3% solutions of salts. Solutions of NaCl, $CaCl_2$, $MgCl_2$, Na_2SO_4, $MgSO_4$, and $CaSO_4$ are not aggressive toward the Ca silicate. $CaCl_2$ and Na_2SO_4 increase the solubility of the Ca silicate, favor the crystallization of the products of hydration, and accelerate the process of hardening. Solutions of $CaSO_4$ and NaCl have no effect on hardening. $MgSO_4$ has a positive effect on hardening because of the formation of crystalline products of hydrolysis.

B Z K

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RAGOZINA, T.A.

Preparation of cements from the schist: $2SiO_2.Al_2O_3.5CaO$. T. A. Ragozina. *Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R.* 1953, No. 4, 41–53.—Processes taking place during calcination of a clay-lime mixt. of compn. $2SiO_2.Al_2O_3.5CaO$ at a temp. of 900–1300° and prepn. of cements from it were studied by using local kaolin and kaolin-type clays with high content of sand or alumina and local limestones. The fixation of lime was studied on two mixts. (1) rich with sand (9.5%) and little alumina and (2) sand-free, made from pure kaolin and alumina. Fluorite (2%) and B_2O_3 (0.5%) were added to stabilize β-$2CaO.SiO_2$. Calcination was made by heating to the desired temp. for 1½ hrs. and keeping at this temp. for 3 hrs. followed by quick cooling in air. Samples, not contg. B_2O_3, calcined at 1200–1300° disintegrated on cooling. Those calcined at 900–1100°, contg. 2–18% free CaO, were stable even without B_2O_3. The disintegration is explained by incomplete formation of a cryst. lattice of β-$2CaO.SiO_2$ at a temp. below 1200°. Above this temp. the liquid phase is present and crystn. is more complete. The fixation of lime is intensive in the solid phase; at 900° 65–80% and at 1150° 84–95% of lime was fixed, the process being intensified by CaF_2 and not affected by sand. At 1250° the fixation of lime was complete in all mixts. with or without B_2O_3. A big residue of SiO_2 was left after digesting the cake, calcined at 900–1250°, with *N* HCl and 5% Na_2CO_3 soln. Free Fe_2O_3 and Al_2O_3 were fixed completely at 900°. Analytical data and mineralogical calcns. indicate extensive formation of $5CaO.3Al_2O_3$ at 1100–1200° as a result of incomplete fixation of SiO_2 in (1) and excess of CaO in (2). The prepn. of silica-belite cement at lower temp. was studied on clinker made from 100 parts of clay, 182 parts limestone, and 0.5% B_2O_3 by calcination at 1200° for 3–6 hrs. Analysis shows complete fixation of CaO, incomplete of SiO_2, Al_2O_3, and TiO_2. The mixt. with low-lime content, calcined at 1200°, gave the silica-belite clinker with content of Ca monoaluminate higher than that for a mixt. satd. with lime and calcined at 1300°. Studies of cements prepd. from these clinkers have shown: (a) calcination of a lime-clay mixt. of $2SiO_2.Al_2O_3.5CaO$ at 1200–1350° gives actively setting kaolin-belite cement with tensile strength 10–25 kg./sq. cm. and compression strength 200–300 kg./sq. cm. Added $CaSO_4.2H_2O$, CaO, and $CaCl_2$ cause quick setting of such cements and cannot be used to increase their strength. Anhyd. $CaSO_4$ added up to 15% does not change the setting time and increases the initial strength. The stability of cements in sulfate soln. was high for those with low polycalcium aluminate content and decreases when its content was increased. A. Shadan

RAGOZINA, T. P.

MT

The decorative kaolin-belite cements. T. A. Ragozina and A. I. Milogradskaya. *Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R.* 1953, No. 4, 54–62.—The decorative kaolin-belite cements were prepd. from local clays, low in Fe, contg. 85% kaolin, and limestone. Two clinkers were prepd. at 1200–1300°: (1) with 100% satn., (2) with 97% satn. calcd. on fixation of CaO as $2CaO.SiO_2$, $CaO.Al_2O_3$, $2CaO.Fe_2O_3$, and $CaO.TiO_2$. Complete fixation in (1) occurred at 1300°, in (2) at 1200°. In expts. (1) was calcined at 1200–1280°, (2) at 1300–1350° for 6 hrs. followed by slow cooling. The clinkers prepd. were not homogeneous in structure and were colored, giving on grinding slightly colored cements. The chem. analysis has shown a big insol. residue of SiO_2, Al_2O_3, and TiO_2. Free-lime content in clinker was: (1) 0.0%, (2) 0.37%, making the actual fixation of CaO for (1) 102.8%, for (2) 98.5%. Microscopic study indicates the presence of β-$2CaO.SiO_2$, $CaO.Al_2O_3$, and polycalcium aluminates. Addn. of 15% $CaSO_4$, calcined at 700–800°, improves the stability of cements in sulfate soln. and mech. properties. The decrease of setting time caused by addn. of anhyd. $CaSO_4$ can be reversed by admixing of borax (0.3–0.4%) or tartaric acid (0.2–0.4%). The kaolin belite cements, contg. 15% $CaSO_4$, were sufficiently stable towards refrigeration and had compressive strength in plastic soln. (1:3) up to 200 kg./sq. cm. The color stability of cements was tested by partial submerging of samples of cement in H_2O and 0.2% soln. of sulfates. The cements were color-stable in H_2O and soln. contg. up to 2000 mg./l. $CaSO_4$ and $MgSO_4$; Na_2SO_4 soln. caused rapid change of color and ultimately the destruction of cement. A. Shadan

(1)

15-57-1-527

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 84 (USSR)

AUTHOR: Ragozina, T. A.

TITLE: The Mineral Composition of the Roasted Mixture $nSiO_2$: mAl_2O_3:2n + mCaO (K voprosu o mineralogicheskom sostave obozhzhennykh smesey $nSiO_2$:mAl_2O_3:2n + mCaO)

PERIODICAL: Dokl. AN UzSSR, 1956, Nr 1, pp 21-24.

ABSTRACT: The author has examined the roasting conditions of mixtures for obtaining alumina cements that produce the most complete conversion of Al_2O_3 to monocalcium aluminate and that prevent the formation of galena. The mineral determinations from the mixtures roasted at 1200°, 1250°, and 1350° are listed in a composite table. The optimum conditions of roasting, during which the greatest quantity of galena was formed, occur at 1200°, with a concentration of lime between 94 and 100 percent. A small addition of CaF_2, especially to mixtures containing lime, favors a decrease in the

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The Mineral Composition of the Roasted Mixture (Cont.)

quantity of tricalcium aluminate at 1250° to 1350°, but leads to complete combination of the lime at 1200°.

A. A. L.

Card 2/2

15-57-10-14328

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 158 (USSR)

AUTHORS: Kantsepol'skiy, I. S., Zhabitskiy, M. S., Ragozina, T. A.

TITLE: Intensifying the Hardening Process of Puzzolan Portland Cement by Using Naturally Baked Clays (Intensifikatsiya protsessa tverdeniya putstsolanovogo portlandtsementa s gliyezhem)

PERIODICAL: Izv. AN UzSSR, ser. khim. n., 1957, Nr 1, pp 33-39

ABSTRACT: Puzzolan portland cement of Uzbekistan containing 30 percent of naturally baked clays is better than portland cement in its resistance to water and sulfates. The properties of naturally baked clay as an active mineral ingredient show up very clearly during hydrothermal treatment of the puzzolan cements. Steam-treatment of puzzolan cements strongly accelerates the interaction of the naturally baked clays and the lime

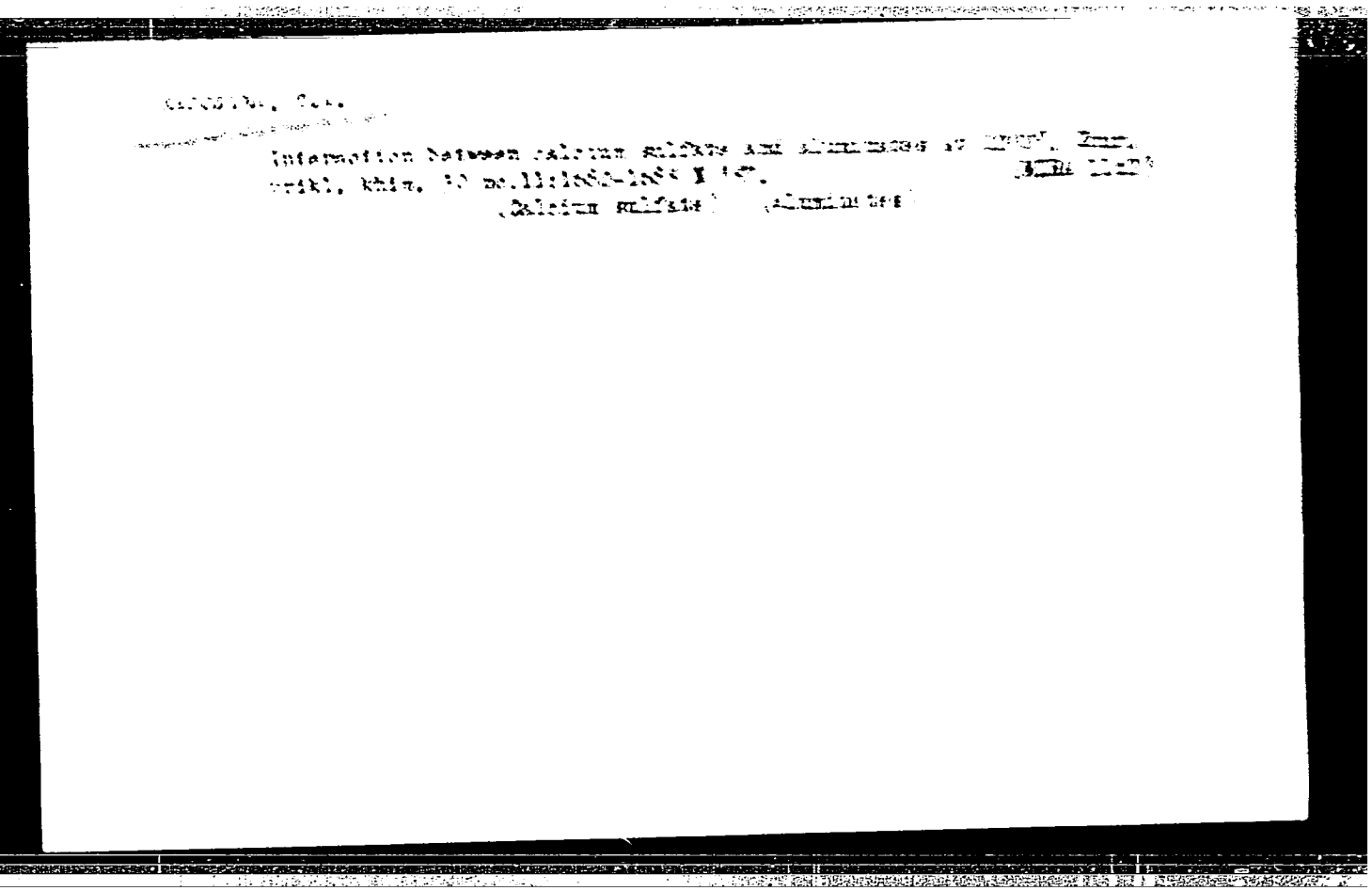
Card 1/2

Intensifying the Hardening Process of Puzzolan (Cont.)

which is separated out during hardening of the portland cement, and this reaction is favorable to a faster rate of hardening of the cement. Ordinary portland cement containing naturally baked clay, brand 400, with a short period of steam-treatment, acquires a greater resistance in one day than is provided by the technical conditions for fast-drying cement.

Card 2/2

V. P. Yeremeyev



RAGOZINA, T.A.

Fast-setting and white cements from Angren raw materials. Uzb. khim.zhur. no.6:55-60 '58. (MIRA 12:2)

1. Institut khimii AN UzSSR.
(Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.

Hydrolysis of alumina-belite cements. Uzb. khim. zhur. no.3: 59-65 '58. (MIRA 12:9)

1. Institut khimii AN UzSSR.
(Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.

Resistance of alumina-belite cements to corrosion by salts.
Uzb. khim. zhur. no. 2:79-86 '60. (MIRA 14:1)

1. Institut khimii AN UzSSR.
(Belite) (Alumina) (Cement)

RAGOZINA, T.A.; GULYAMOV, M.G.; Prinimala uchastiye: MUKHAMEDOVA, U.

Hardening of alumina belite cements in corrosive solutions and the effect of various hydrolytic additives on the process. Kor.tsem.i mery bor'by s nei no.2:109-130 '62. (MIRA 15:11)

(Alumina cement)
(Corrosion and anticorrosives)

RAGOZINA, T.A.; GULYAMOV, M.G.; Prinimala uchastiey: MUKHAMEDOVA, U.

Penetrability of the structure of a cement brick and the penetration of Mg^{++} and SO_4^{--} ions into it. Kor.tsem.i mery bor'by s nei no.4:131:145 '62. (MIRA 15:11)
(Alumina cement)
(Salts)

RAGOZINA, T.A.; ZKHEDOV, M.A.

Effect of $CaSO_4$ on the phase composition of calcium silicates and aluminates during firing. Uzb.khim.zhur. 6 no.2:5-11 '62. (MIRA 15:7)

1. Institut khimii AN UzSSR.
(Calcium sulfate) (Calcium silicates)
(Calcium aluminates)

AKHMEDOV, M.A.; RAGOZINA, T.A.

Directing effect of calcium sulfate in mineral-forming process during clinkering. Uzb.khim.zhur. 7 no.1:23-27 '63. (MIRA 16:4)

1. Institut khimii AN UzSSR.
(Portland cement) (Calcium sulfate)

YASTREBOV, A.F.; MASTENITSA, M.A.; KOLDOMOV, M.V.; KORCLENKO, G.A.
RAGOZINA, T.T.; VILENCHIK, R.Yu.

Lung diseases of adenoviral nature in Pavlovsk District, Altai Territory. Trudy TomNIIVS 14:60-64 '63. (MIRA 17:7)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok i Altayskiy krayevoy otdel zdravookhraneniya.

[redacted], V.S.

Characteristics of the conversion of the basic forms of circulation and types of processes in June-December and the possibility of detailing forecasts for September. Trudy AANII 262:152-174 '65. (MIRA 19:1)

S/169/62/000/005/056/093
D228/D307

AUTHOR: Ragozina, V. S.

TITLE: A method of forecasting large air-temperature anomalies for the Chukotskoye Sea in October

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 43, abstract 5B288 (Tr. Arkt. i antarkt. n.-i. in-ta, 240, 1961, 153-162)

TEXT: The investigation of the conditions of formation of large positive and negative air-temperature anomalies in October for four stations (Vrangel' Island, Shmidt Cape, Vankarem, Uelen) was made in cases with a warm and a cold October (when the anomaly at the focus comprised $\pm 2^{\circ}$ and more) for 1931-1958. Anomalously warm and anomalously cold Octobers have the same frequency (according to 10 cases). The mean monthly temperature anomalies are caused not by separate sharp changes in the temperature, but by its generally increased or diminished background. Some diagnostic and prognostic relations between large monthly temperature anomalies and the fre-

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S/169/62/000/005/056/093
D228/D307

A method of forecasting ...

quency of days with G. Ya. Vangengeym's main forms of atmospheric circulation were derived. In 80% of the cases a cold October is distinguished by the prevalence of processes of the westerly form. A warm October, on the contrary, is characterized in 80% of the cases by the predominance of processes of the easterly form. Meridional circulation processes are not significant for the formation of large October anomalies. During negative and positive anomalies that are close to the norm the correlation of the westerly and easterly forms of circulation is fulfilled only in one-third of the cases in years with a cold October; in years with a warm October it is unfulfilled in all instances. Large temperature anomalies are caused by peculiarities in the atmospheric circulation's development in the period of formation and in the preceding months. The maximum divergence in the frequency of the number of days with meridional and westerly circulation forms in the months preceding October is noted in May. When the processes of meridional and easterly forms of circulation prevail in May, in October it is possible to expect with a high probability (80%) large positive

Card 2/3

A method of forecasting ...

anomalies, and large negative anomalies if the frequency of westerly circulation processes is high. 2 references. [Abstracter's note: Complete translation.]

Card 3/3

L 8726-65 EWT(1)/FCC AFETR GW S/3116/63/253/000/0077/0084
ACCESSION NR: AT4046482

AUTHOR: Ragozina, V.S.

TITLE: Peculiarities of synoptic processes causing major air temperature anomalies in October in the Chukchee Sea area

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy*, v. 253, 1963. Sbornik statey, posvyashchenny*y pamyati V. V. Frolova; V. V. Frolov; problems in the hydrometeorology of the polar regions), 77-84

TOPIC TAGS: long-range weather forecasting, weather forecasting, atmospheric temperature anomaly, meteorology, Arctic

ABSTRACT: In the autumn, the Chukchee Sea is one of the principal parts of the route along which vessels following the Northern Sea Route move. For this reason, the author has exploited data for the years 1931-1958 to determine the pattern of synoptic processes causing major temperature anomalies in October in that area. A month was considered anomalous if the sign of the anomaly was maintained over a large part of the sea and the value of the anomaly attained or exceeded ± 2C at the center. A sample of 20 anomalous (10 positive and 10 negative) months was analyzed. For each of these

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L 8726-65
ACCESSION NR: AT4046482

groups the author compiled charts of the mean monthly values of surface pressure, the mean height of the AT-500 mb surface, its anomalies, and air pressure and temperature anomalies. In addition, charts of centers of heat and cold were compiled. The positive anomalies tend to center on Wrangel Island, as shown in Fig. 1 of the Enclosure, and are associated with an easterly form of circulation. In addition, there is a characteristic development of stable blocking systems which are connected across the region of the pole by high-level ridges of the Pacific Ocean and European anticyclones. This joining occurs as a result of heat advection along the western periphery of high-level ridges. The negative anomalies (-2C or more) in October have the pattern of distribution shown in Fig. 2 of the Enclosure. In such cases the Arctic anticyclone is connected with the ridge of the Siberian anticyclone by a broad zone of high pressure which passes through the Chukchee, East Siberian and Laptev Seas. With this positioning of pressure fields there is a movement of cyclones from west to east. As a result, interlatitudinal exchange is weakened and progressive radiation cooling begins in the polar region, in contrast to radiation heating in the lower latitudes. As a result almost the entire Arctic, but especially its eastern half, has temperatures below the mean long-term values. The peculiarities of the distribution of pressure fields in the Arctic

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L 8726-65

ACCESSION NR: AT4046482

and over the northern hemisphere, caused by a westerly form of circulation, determine the development of a strong cold anticyclone in the Arctic and cyclonic activity in the middle latitudes. The movement of cyclones will be along paths from the west to east, leading to the negative temperature anomalies. Orig. art. has: 6 figures.

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, Leningrad (Arctic and Antarctic Scientific Research Institute)

SUBMITTED: 00 ENCL: 02 SUB CODE: ES

NO REF SOV: 003 OTHER: 000

Card 3/5

L 8726-65

ACCESSION NR: AT4046482

ENCLOSURE: 01

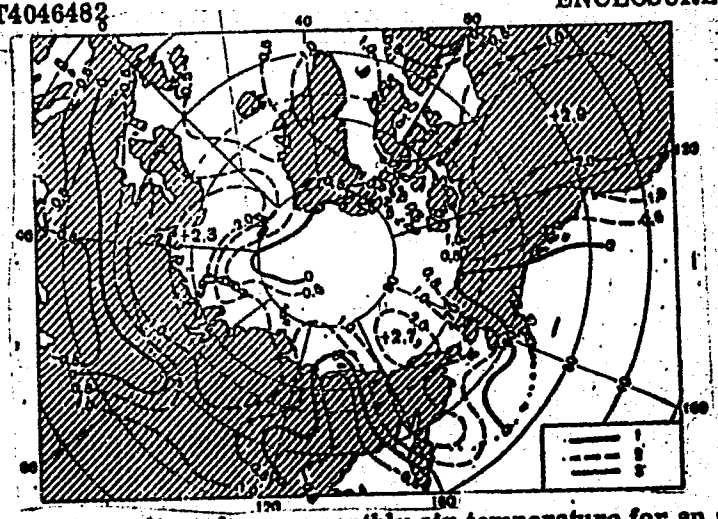

Fig. 1. Distribution of anomalies of mean monthly air temperature for an anomalously warm October. 1 - zero; 2 - positive; 3 - negative.

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L 8726-65
ACCESSION NR: AT4046482

ENCLOSURE: 02

Fig. 2. Distribution of anomalies of mean monthly air temperature for an anomalously cold October. 1 - zero; 2 - positive; 3 - negative.

Card 5/5

L 16633-65 EWT(1)/EWG(v) Pe-5/Pae-2 GW

ACCESSION NR: AT4048794 S/3116/63/255/000/0108/0118

AUTHOR: Ragozina, V.S.

TITLE: Peculiarities of synoptic processes in periods preceding anomalous autumns in the eastern Arctic

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy*, v. 255, 1963. Sbornik statey po voprosam dolgosrochny*kh prognozov pogody* dlya Arktiki (Collection of articles on the problems of long-range weather forecasting for the Arctic), 108-118

TOPIC TAGS: atmospheric circulation, weather forecasting, long-range weather forecasting, Arctic meteorology

ABSTRACT: Analysis of the data presented in this paper shows that the character of the synoptic processes preceding large positive and large negative air temperature anomalies in the eastern Arctic in the autumn period is basically different. In a period preceding large positive air temperature anomalies in the eastern Arctic there is a transformation of

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L 16633-65
ACCESSION NR: AT4049794

the meridional form of circulation (in May-July) to easterly (in August). The process is characterized by the stable development of a high-level warm Arctic anticyclone, displaced toward the shores of northern Canada and by the filling of the Aleutian Low. At this time there is increased intensity of easterly flow with a southern component. In these cases the movement of Arctic cyclones occurs with a large meridional component. In a period preceding large negative air temperature anomalies in the eastern Arctic there is a transformation of a westerly form of circulation (in May to July) into W + E (in August). At this time there is development of a low and cold Arctic anticyclone and the Aleutian Low and an intensification of easterly transport with a northern component. Cyclines move in a latitudinal direction from west to east. The character of the transformation of the principal forms of atmospheric circulation and the development of processes in the Arctic and adjacent regions associated with these peculiarities in the May-August period determine the formation of large air temperature anomalies in the eastern Arctic in the autumn period. The determined characteristics can be used in preparing long-range weather forecasts. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, Leningrad (Arctic and Antarctic Scientific Research Institute)

L 16633-65
ACCESSION NR: AT4048794

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 003 OTHER: 000

Card 3/3

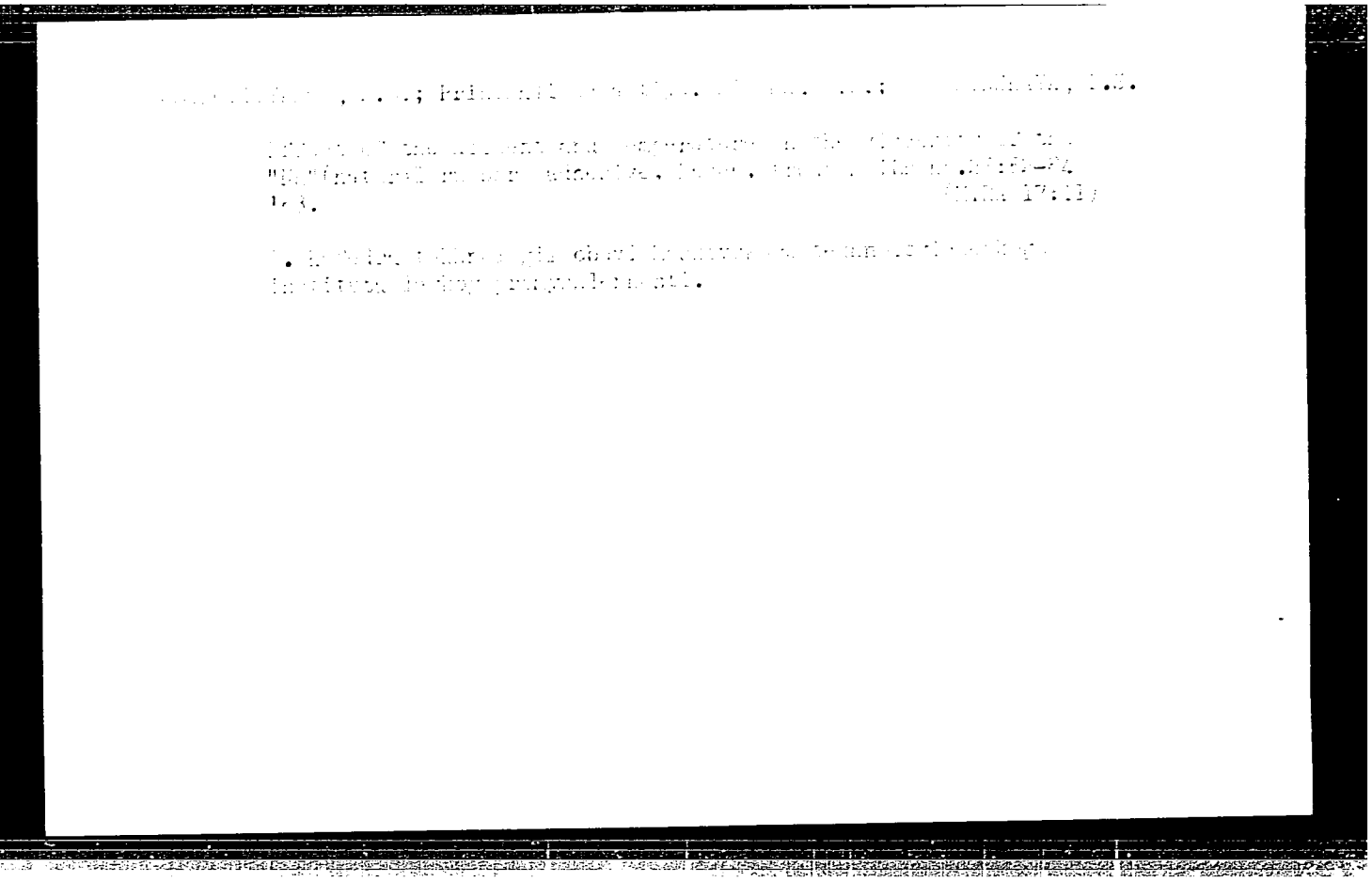
KAGARMANOV, V.A.; [illegible]

Refractories for copper smelting converters. TSvet. met. 38 no.4: 31-33 Ap '65. (MIRA 18:5)

RAGOZINNIKOV, V.A.; VOROB'YEVA, K.V.

Refractory materials for calcining furnaces. Ogneupory 29 no.12: 555 '64. (MIRA 18:1)

1. Vostochnyy institut ogneuporov.



L 53939-65 EPA(s)-2/EWT(m)/EPF(n)-2/EWG(m)/T Pz-6/Pt-7/Pu-4 DS

ACCESSION NR: AP5014549 UR/0089/65/018/005/0545/0546

41
B

AUTHOR: Fradkin, G. M.; Kodyukov, V. M.; Ragozinskiy, A. I.

TITLE: "Beta-2" isotopic source of electric energy

19

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 545-546

TOPIC TAGS: electric energy source, energy source, isotopic energy source, power supply

ABSTRACT: A new radioisotope thermoelectric generator, produced by the State Committee for the Use of Atomic Energy in the USSR, is briefly described. A photograph of the device is included. Called the "Beta-2," the 5—7-watt generator serves as a power source for unmanned weather stations in remote locations which relay data on temperature, wind velocity and direction, barometric pressure, precipitation, and sunshine over distances of up to 600 kilometers. A special conversion and storage system makes it possible to produce an output voltage of 32 v and to supply various instruments with 1000-watt pulses. The radiation dose 1 meter from the surface of the 150-kg generator is about 1 roentgen/hr. This can be reduced to 10 milliroentgen/hr when the device is transported in a supplementary container. [ZL]
Orig. art. has: 1 figure.

Card 1/2

L 53979-65

ACCESSION NR: AP5014549 0

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE,NP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4051

Card 2/2

RAUBIN, N. N. Cand. Biolog. Sci.

Dissertation: "Interbreeding of Wheat with Couch Grass, and R-Hybrids with Wheat." Moscow State Pedagogical Inst imeni V. I. Lenin, 17 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

RAGULIN, A. A.

USSR/Medicine - Food
Agriculture

Jan 1947

"Hybrid Triticum Durum X Elymus Arenarius," A.A. Ragulin. 4 pp

"Dok Ak Nauk SSSR" Vol LV, No 3

Submitted by N.V.Tsitsin, Institute of Grain Agriculture in the Non-Black Earth Belts, Nemchinovka. Report on the work done by Tsitsin from 1943 in his search for a hardy type of wheat which he created by crossbreeding Triticum durum and Elymus arenarius.

21T89

RAGULIN, A. Ye., Candidate Tech Sci (diss) --- "A study of the process of salting anchovies in order to select the most rational system of processing them". Moscow, 1959. 14 pp (Kaliningrad Tech Inst of the Fish Industry and Economy), 150 copies (KL, No 24, 1959, 140)

RAGULIN, A.Ye., inzh.-tekhnolog.

Comparative characteristics of salting anchovies with dry salt and brines. Trudy VNIRO 35:53-69 '58. (MIRA 11:11)
(Fish, Salt) (Anchovies)

BORISOV, S.V., inzhener; RAGULIN, G.I., inzhener.

High-pressure mercury lamps with corrected chromaticity. Svetotekhnika 3 no.2:1-4 F '57. (MLRA 10:3)

1. Moskovskiy elektrolampovyy zavod.
(Electric lighting, Mercury-vapor)

PETUKHOV, B.; RAGULIN, N.

Determination of heat conductivity of aqueous solutions of monoethanolamine by the method of regular regime. Kholodil'naya Tekh. 30, No.1, 56-9 '53. (CA 47 no.20:10326 '53) (MLRA 6:3)

1. V.M.Molotov Energetics Inst., Moscow.

RAGULIN, N. F.

RAGULIN, N. F.: "The use of pressure equalization to achieve stability of liquid movement in steam-generating piping with forced movement." Min Electric Power Stations USSR. All-Union Order of Labor Red Banner Heat Engineering Sci Res Inst imeni F. E. Dzherzhinskiy. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science.)

So: Knizhnaya letopis', No. 37, 1956. Moscow.

AUTHOR: Ragulin, N.F., Engineer (Moscow Division Central Boiler and Turbine Institute).

TITLE: Pressure equalisation in the turns of a uniflow boiler. (Vyravnivaniye davleniy v vitkakh pryamotochnogo kotla.)

PERIODICAL: "Teploenergetika" (Thermal Power), 1947, Vol. 4, No. 6, pp. 21 - 25, (U.S.S.R.)

ABSTRACT: A method of equalising the pressure is proposed for reducing pulsation between turns in uniflow boilers instead of throttling, which wastes electric power. In essence the method consists in that an equalising header is connected to a system of parallel tubes at the same distance from the inlet header. The pressure is equalised between the tubes at the point of installation of the equalising header so that the two sections of the bundle of tubes can be considered separately.

Pressure pulsations occur in regions of low steam content. These pulsations of pressure cause pulsation between turns, but this does not always follow. The governing factor is the ratio of the hydraulic resistance of the economiser section to that of the evaporative section. Inter-turn pulsation cannot happen if the hydraulic resistance of the economiser section together with diaphragms is equal to or greater than the hydraulic resistance of the evaporative section. This is confirmed by experimental data obtained on test rigs and on a number of boilers. The results are plotted in a graph of the

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Pressure equalisation in the turns of a uniflow boiler. (Cont.)

relative amplitude of pulsation as a function of the ratio of the resistances. The term relative amplitude of pulsation means the ratio of the amplitude of oscillation of the flow to the mean flow at the inlet to the tube.

Investigation of the influence of an equalising header on the inter-turn pulsation was carried out on a three-coil model of a uniflow boiler heated by steam. The internal diameter of the tubes was 10 mm, the length of each turn was 55.6 metres, the experimental installation was fitted with five equalising headers made of the same piping as the turns. Each of them could be closed by valves. Measurements could be made of the flows and temperature of water at the inlet to the coils, the steam content and flows at the exit from the coils and the pressure and temperature along the length of the coils. In carrying out the tests the equaliser tubes were turned off, pulsating conditions were established and then the equalising headers were connected. Only one header worked at a time.

Comparison of conditions before and after connection of the header gave a clear idea of its effect on pulsation. The experiments were mainly made at a pressure of 100 atm. The results of the tests are presented on a graph and show that the ratio of the hydraulic resistance of the economiser section to that of the evaporative section really is the criterion which governs the intensity of pulsation and also the boundary of the region in which pulsation cannot occur. The tests showed the presence of oscillations in the heat absorption of

Pressure equalisation in the turns of a uniflow boiler. (Cont.)

turns during pulsation which points to the auto-oscillatory character of inter-turn pulsation.

The influence of the equalising header on the hydro-dynamic characteristic and thermal non-uniformity of operation of turns is considered. Calculated hydro-dynamic characteristics for a boiler type CNN-200/140 are plotted. The distribution of static pressure over the length of the turns is also plotted for different values of flow in the tube with allowance for reduction of pressure due to friction with uniform distribution of the thermal load. It is shown how the pressure can vary between turns. As a result of connecting an equalising header these pressures are equalised because of flow of medium from turns with high pressure and small flow to turns with lower pressure and higher flow. The influence of an equalising header is considered theoretically and calculations are made for the pressure distribution over the length of the radiation section of a boiler type 51-CN-220/100. The curves which are plotted show that flow of liquid into the equalising header is to be expected from turns of high heat intake.

By way of example calculations are given applicable to the lower radiation part of a boiler type 51-CN-220/100 for various positions of the equalising header. The results of the calculations are presented graphically giving on the ordinate the ratio of the difference of the heat content of

Pressure equalisation in the turns of a uniflow boiler. (Cont.)

turns with maximum and minimum heat intake after installation of an equalising header to the difference of heat content in the same turns before its installation. The length of the turn is plotted on the abscissa. The best place at which to install the equalising header is shown.

The experimental data and also tests carried out on a boiler type 69YC qualitatively confirm the results of the theoretical calculation.

The influence of the diameter of the equalising header on its effectiveness could not be investigated but it is probably sufficient to make it twice the diameter of the tubes to which it is connected. The unions between the tubes and the header should be made as large as possible.

Equalising headers should be more widely used in uniflow boilers.

5 figures, no literature references.

Card 4/4

RAGULIN, N.F.

Increasing the reliability of water walls with natural circulation. Nauch.dokl.vys.shkoly; energ. no.4:175-184 '59. (MIRA 12:5)
(Boilers)

KRASNOV, A.I., inzh.; RAGULIN, N.F., inzh.

Use of breather collectors in once-through boiler manufacture.
Energomashinostroenie 4 no.2:1-5 F '58. (MIRA 11:4)
(Boilers)

AUTHOR: Ragulin, M.F., Engineer 96-58-2-10/23

TITLE: Measurement of the Steam Content of a Flow (Izmereniye parosoderzhaniya potoka)

PERIODICAL: Teploenergetika, 1958, No 2, pp 51 - 55 (USSR)

ABSTRACT: Available methods of measuring the steam content of a flow are cumbersome or inaccurate. This article describes moisture-content meters developed for use when the rate of flow of steam/water mixture is not known. The first moisture-content meter contains a separator and is based on separating the steam/water mixture and measuring the dynamic heads of the steam/water mixture and the dry saturated steam. The arrangement of the instrument is illustrated schematically in Fig.1. It includes a film-type separator and an automatic hydraulic shutter. The possibility of measuring the steam content and the flow of steam/water mixture by means of two pressure-tubes was demonstrated theoretically before the equipment was tested. The measurement is only possible when the steam/water mixture moves at high speed with practically no liquid film on the tube walls. Tests show that the speed should be at least three times the critical speed calculated from L.K. Ramzin's semi-empirical formula, which is given.

Expressions are written for the dynamic heads for dry saturated

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steam and for steam/water mixtures. An expression is then derived for the steam content by weight. A simplified formula is applicable near the triple point; this formula corresponds to a straight line passing through the origin of the graph. Over a wide range of pressure up to 70 atm., the full and the simplified formula give very similar results. An equation is stated for use in selecting the dimensions of the hydraulic shutter and steam line.

The second moisture-meter circuit contains no separator. It is based on the principle that a pressure tube and throttling diaphragm are installed in the pipe line through which the flow is moving. A flow equation is derived on the assumption that the water is uniformly distributed over the tube section and that the throttle measures only the flow of dry saturated steam. An expression is then derived for the steam content of the flow, which is a function of the pressure and the ratio of the heads measured by the instrument.

The moisture meters were tested on a rig illustrated diagrammatically in Fig.3. The steam/water mixture was prepared by evaporating water in steam coils. The dried steam and the water from the separator passed through separate tubes to coolers and

Card2/4 measuring tanks. The water level in the hydraulic shutter was

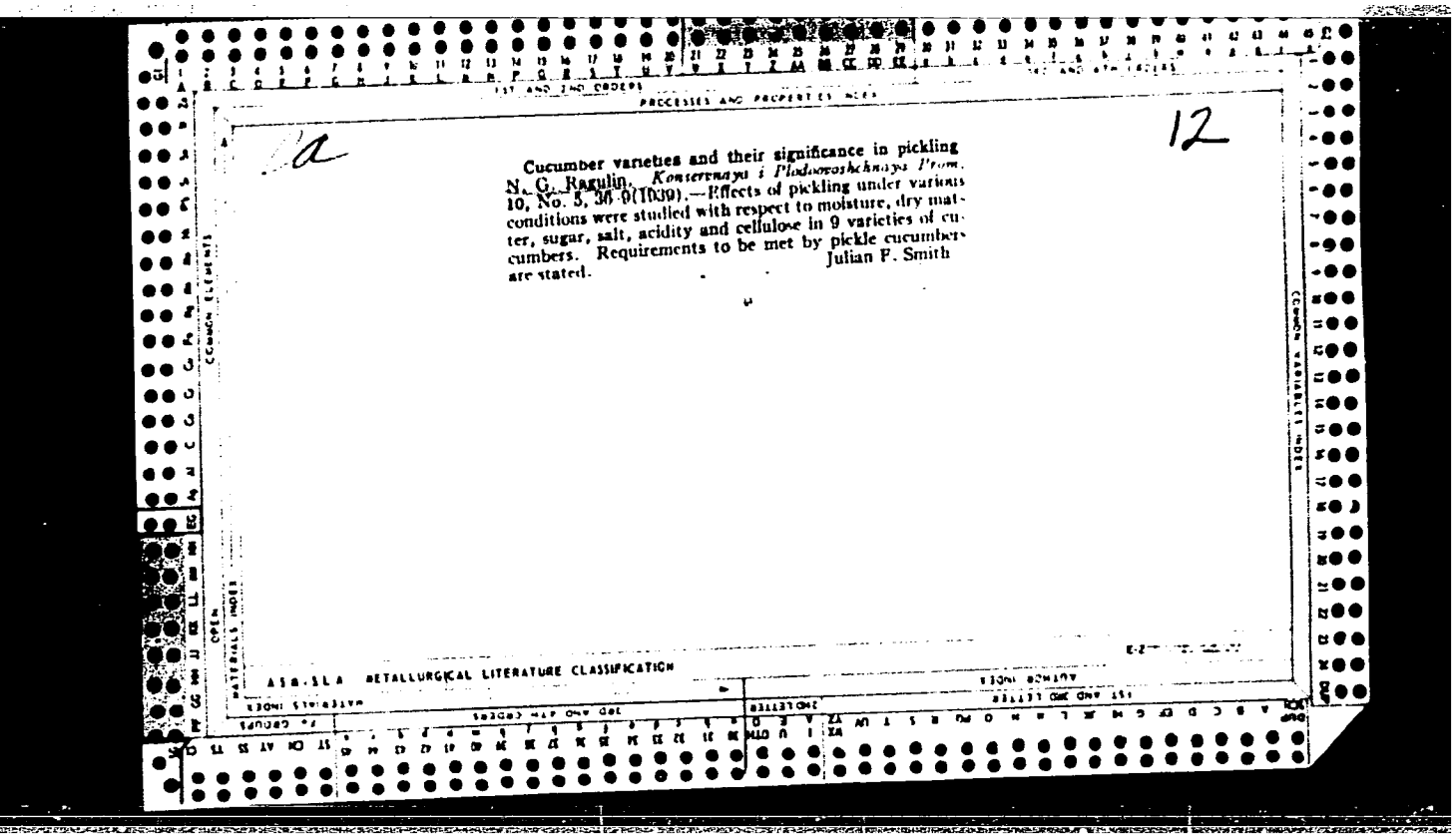
controlled by the differential manometer illustrated in Fig.1. The experimental procedure is described and experimental results for the two kinds of meter are given in Figs. 4 and 5. The dispersion of the experimental points did not exceed 3%, showing that the tube diameter and the pressure are not critical. In the case considered, the accuracy of determination of the steam content depended on the effectiveness of separation of steam/water mixture in the separator. Therefore, special tests were made by the salt method, to determine the efficiencies of the two meters under operating conditions. Both were found to be very efficient. It was also decided to verify experimentally the relationship between the water level in the shutter and the reading of the differential manometer. The method of controlling the water level in the shutter was shown to be reliable. The results of tests to verify the non-separating type of moisture meter are given in Fig.6. The dispersion of experimental points is low.

Since the tube diameter has practically no influence on the operation of the moisture meters, it may be supposed that it is also unimportant in the non-separating type of water meter. Theoretical calculations of steam quality given in the table are

in satisfactory agreement with test results for steam contents greater than about 0.5. The theoretical formula is not valid for steam contents lower than this. The non-separating moisture meter is the simpler type. When measuring steam contents under transient conditions, the presence of a separator and hydraulic shutter can cause appreciable distortions. Both types of meter are suitable for steam content measurements if the rate of flow of steam/water mixture is unknown. When the rate is known, simpler methods may be used. The steam content by weight and the pressure drop are graphed in relation to the square of the flow for different pressures in Figs. 7 and 8. There are 8 figures.

ASSOCIATION: MO TsKTI

AVAILABLE: Library of Congress
Card4/4 1. Flows-Steam content-Measurement



12a

Cucumber varieties and their significance in pickling. N. G. Ragulin. *Konservnaya i Plodoovoshchnaya Prom.* 10, No. 5, 36-9(1939).—Effects of pickling under various conditions were studied with respect to moisture, dry matter, sugar, salt, acidity and cellulose in 9 varieties of cucumbers. Requirements to be met by pickle cucumbers are stated. Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

25(1) PHASE I BOOK EXPLOITATION SOV/1790

Ragulin, Vasiliy Vasil'yevich

Proizvodstvo pnevmaticheskikh shin (Manufacture of Pneumatic Tires) Moscow, Goskhimizdat, 1958. 355 p. Errata slip inserted. 4,000 copies printed.

Ed.: L.B. Tomchin; Tech. Ed.: Ye. G. Shpak.

PURPOSE: This book is intended for workers of the tire manufacturing industry attending factory sponsored courses. It may also serve as a textbook for students at tekhnikums.

COVERAGE: This book contains basic information on the manufacture of tires (automobile, agricultural machinery, mobile construction equipment, motorcycle, and bicycle). It discusses the raw materials used and the various intermediate or semifinished products of the industry. Processing techniques and equipment used in the manufacture of automobile and bicycle tires are discussed in detail. Quality control and safety precautions are also treated. The author thanks Engineer A.G. Yefimov for his assistance. There are 15 Soviet references.

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TABLE OF CONTENTS:

Manufacture of Pneumatic Tires SOV/1790

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6/30/59

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RAGULIN, Vasiliy Vasil'yevich, TOMCHIN, L.B., red., SHPAK, Ye.G. tekhn.red.

[Manufacture of rubber tires] Proizvodstvo pnevmaticheskikh shin. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1958. 355 p. (MIRA 11:9)

(Automobiles--Tires)

RAGULIN, V.V.; KONDRAT'YEVA, T.A., red.; CHIZHEVSKIY, E.M., tekhn. red.

[Technology of rubber] Tekhnologiia reziny; uchebnoe posobie dlia studentov zaochnogo obucheniia (k uchebnomu planu, utverzhdennomu 30 fevralia 1960 goda). Moskva, Rosvuzizdat, 1963. 158 p. (MIRA 17:1)

RAGULINA, A.N.

Condition of the cardiovascular system in hepatocholecystitis in children. Vrach. delo no.4:371-373 Ap '59. (MIRA 12:7)

1. Kafedra pediatrii (zav. - prof. E.G. Gorodetskaya) sanitarno-gigiyenicheskogo i stomatologicheskogo fakul'tetov Kiyevskogo meditsinskogo instituta.
(LIVER--DISEASES) (GALL BLADDER--DISEASES)
(CARDIOVASCULAR SYSTEM)

BOCHKAREV, L.M.; RAGULINA, A.T.

Nodulizing oxidized nickel ores for shaft furnace smelting.
Sbor. nauch. trud. Gintsvetmeta no.18:259-274 '61.
(MIRA 16:7)

(Nickel ores) (Ore dressing)

REZNIK, I.D., kand. tekhn. nauk; TARKHOV, N.G., inzh.; RAGULINA, A.T., inzh.

Smelting nickel agglomerate in an oxygen-enriched air blast.
Kislorod 10 no.5:6-14 '57. (MIRA 11:4)
(Nickel--Metallurgy)

SMIRNOV, M.P., kand. tekhn. nauk; BIBENINA, G.A.; TARKHOV, N.G.; RAGULINA, A.T.

Developing a continuous method of bismuth removal from lead. Sbor. nauch. trud. Gintsvetmeta no.23:217-234 '65. (MIRA 18:12)

BOCHKAREV, L.M.; RAGULINA, A.T.; SERPOV, V.I.; CHERMAK, L.L.; SHERMAN, B.P.

Pilot plant testing of the smelting of oxidized nickel ores with a blow containing up to 45 percent oxygen. TSvet. met. 33 no.7:23-28 Jl '60. (MIRA 13:7)
(Nickel--Metallurgy) (Oxygen--Industrial applications)

BOCHKAREV, L.M.; RAGULINA, A.T.; TUSNOVA, N.V.; KHARITONOVA, G.P.

Pelletizing nickel ores for shaft furnace smelting. TSvet. met. 33 no.1:77-78 Ja '60. (MIRA 13:5)
(Nickel--Metallurgy)

KHAGUNA, A. T.

67-12-2/12

AUTHORS: Reznik, I. D., Candidate of **Technical Sciences**, Tarkhov, M. G., Engineer, Ragulina, ... T., Engineer.

TITLE: The Smelting of a Nickel Agglomerate With an Oxygen-**enriched** Blast (Plavka nikelevogo aglomerata na dut'ye, obogashchennom kislorodom).

PERIODICAL: Kislorod, 1957, Nr 5, pp. 6 - 14 (USSR).

ABSTRACT: The shaft-furnace smelting of oxidized nickel ores is characterized by the low productivity of the shaft-furnaces, the great consumption of coke and the low coefficient of the utilization of heat. With present smelting conditions the consumption of coke is 30-35% of the weight of the melted material and almost 50% of the prime cost of nickel. The reduction of the coke consumption and the simultaneous increase of the productivity of shaft-furnaces can be reached by a preheating of the blast, an increased addition of air and a more complete combustion of coke. The authors studied the possibilities of using a blast enriched with oxygen. Experimental meltings were carried out according to the Gintsvet-method in the Bronze-Brass Works in Moscow. The project of the experimental plant was carried out by "Gipronikel". The vaporization station was projected by "Giprokislorod". Consultants were: A. A. Tseydler, G. Ya. Leyzerovich, V. V. Kondakov, I. M. Rafalovich. Conclusions: 1. - Ordinary shaft-furnaces for nickel smelting can be used for a smel-

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ting with a blast which is enriched with oxygen up to 35°/o without any essential changes of their construction. 2. - In the smelting with the blast, enriched with oxygen up to 31-35°/o, the consumption of coke dropped to 18-23°/o. The savings of coke were reached became it was subjected to a more complete combustion to carbon dioxide. Also the drop of temperature as well as of the relative quantity of waste gases and water contributed to the cooling of caissons. 3. - The enrichment of the blast with oxygen increased the specific fused mass (proplav) of the agglomerate. At a content of oxygen of 31°/o in the blast the fused mass amounted to 131°//, compared with the fused mass with air blowing, with 39°/o of oxygen it amounted to 177°/o. This was dependent on the more intensive combustion of coke and the decrease of its specific consumption. The values obtained with 39°/o of oxygen can not be regarded as being very exact, because of organisatory difficulties in the raw material during smelting and because of the periodic scaffolding of the charge. 4. - The increase of the fused mass and the reduction of the consumption of coke had no essential influence on the loss of nickel with the slags. The extraction of nickel in matte (v shteyn) was 75-76°/o on all conditions. 5. - The smelting with the oxygen blower was characterized by the drop of the signition point of the combustion of coke in the furnace as well as by the drop of the

temperature of waste gases. In the case of uninterrupted operation the temperature of the waste gases was 100°C and less; the temperature of the slag rose to 1400°C. The conditions of operating the furnaces became better. The yield of circulating products decreased to almost half of their values and was 9,6% instead of 18,1%. 6. - In the smelting with an oxygen blast of up to 39% oxygen the nickel content in matte increased from 18,1 to 21,4% and the content of cobalt increased from 0,41 to 0,57%. The content of sulfur decreased from 16,3-7,7%. The composition of the slag remained almost unchanged and only the content of magnetite decreased from 3,3 to 1,4%. The experimental smelting showed essential advantages in the use of the blast with oxygen. - Following the results obtained the decision was made to carry out industrial experiments in the " Yuzhuralnikel'" combined works. The oxygen station erected and put to work in 1956, called KT-1000, made it possible to carry on the experiments on industrial conditions. The experiments showed that a small enrichment of the blast with oxygen will be more effective with industrial plants than with small furnaces. The usefulness of the use of oxygen in shaft meltings is, at present, mainly determined by economic reasons. Approximate calculations showed that an enrichment of the blast with 25-26% of oxygen will bring about savings of prime cost due to smaller coke consumption, with a current cost of 14 Kopekes per

The Smelting of a Nickel-Agglomerate With an Oxygen-enriched Blast. 67-12-2/12

1 kWh. The carrying out of the industrial experiments will make it possible to solve the question, which of the methods is more economic and more useful for the smelting - the heating of the blast or an enrichment with oxygen.
There are 4 figures, 7 tables, and 1 Slavic reference.

AVAILABLE: Library of Congress.

1. Metallurgy 2. Furnaces-Smelting 3. Air blast-Effects

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S/137/63/000/001/002/019
A006/A101

AUTHORS: Bochkarev, L. M., Ragulina, A. T.

TITLE: Rounding-off oxidized nickel ores for shaft-furnace smelting

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 7, abstract 1G47 ("Sb. nauchn. tr. Gos. n.-i. in-t tsvetn. met.", 1961, no. 18, 259 - 274)

TEXT: The rounding-off process was conducted for the purpose of finding a method producing high-quality charges. To obtain rounded-off lumps of satisfactory crushing strength (> 5 kg) and dumping resistance (> 5 kg) the material supplied for rounding-off should be of ≤1 mm size. Rounded-off lumps can be obtained from shaft-furnace heat charges, with or without fuel. The size of the rounded-off lumps can be regulated by changing the moisture of the charge. To obtain rounded-off lumps, resistant at 500°C, it is sufficient to eliminate the hygroscopic moisture contained in same. Rounded-off lumps, resistant at room temperature, are produced by adding 5% alabaster to the ore. Coking does not increase the resistance of the rounded-off lumps. Carbonizing assures the pro-

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A006/A101

Rounding-off oxidized nickel ores for...

duction of rounded-off lumps whose strength makes them suitable for shaft furnace smelting. The crushing resistance of the lumps decreases with higher temperatures (from 600 to 1,100°C), remaining sufficient for shaft-furnace smelting; the composition of the charge has a low effect upon the strength of the rounded-off lumps. The author mentions a system of preparing the ore for shaft-furnace smelting by rounding-off. See also RZhMet, 1960, no. 6, 12231.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

OVSYANNIKOV, N.A.; SOLENKO, V.A.; RAGULINA, L.V.

Improve the economic indices of the work of canning plants. Kons. i ov. prom. 18 no.12:26-28 D '63. (MIRA 17:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.

DEKHANOV, N.M., inzh., otv. red.; KRAVCHENKO, V.A., inzh., zames. otv. red.; RAGULINA, R.I., inzh., red.; YIM, A.P., kand. tekhn. nauk, red.; GASIK, M.I., assisten, red.; ZEL'DIN, V.S., inzh., red.; SAKHAROV, R.S., red.; BELIKOV, Yu.V., inzh., red.; KOCHERGA, N.T., ved. red.; SYCHUGOV, V.G., tekhn. red.

[Development of the iron alloy industry in the U.S.S.R.] Razvitie ferrosplavnoi promyshlennosti SSSR. Kiev, Gos. izd-vo tekhn. lit-ry, USSR, 1961. 243 p. (MIRA 15:4)

1. Ukraine. Gosudarstvennyy nauchno-tekhnicheskiy komitet. Institut tekhnicheskoy informatsii. 2. Zaporozhskiy zavod ferrosplavov (for Dekhanov, Kravchenko, Ragulina). 3. Dnepropetrovskiy metallurgicheskiy institut (for Gasik, Belikov). (Iron industry)

GASIK, Mikhail Ivanovich, kand. tekhn. nauk, dots.; L'VOVA, Ol'ga Konstantinovna, inzh.; RAGULINA, Raisa Ivanovna, inzh.; ALIVOYVODICH, Miro Khristoforovich, inzh.; KHITRIK, S.I., prof., doktor tekhn. nauk, nauchn. red.

[Manufacture and operation of continuously self-annealing electrodes and anodes] Proizvodstvo i ekspluatatsiia neprerynykh samoobzhigaiushchikhsia elektrodov i anodov. Moskva, Metallurgiia, 1965. 254 p. (MIRA 18:5)

ACC NR: AM6010193 Monograph UR/

Ragul'skis, Kazimeras Mikolo; Vitkus, Ionas Iono; Ragul'skene, Vida Leono

Self-synchronization of mechanical systems. [pt] 1: Self-synchronizing and vibro- percussive systems (Samosinkhronizatsiya mekhanicheskikh sistem. [ch.] 1: Samosinkhronnyye i vibroudarnyye sistemy) Vilnyus, Izd-vo "Mintis", 1965. 185 p. illus., biblio. (At head of title: Akademiya nauk Litovskoy SSR. Institut energetiki i elektrotekhniki) 1400 copies printed.

TOPIC TAGS: mechanical engineering, vibration theory, vibration analysis, mechanical vibration, self synchronizing mechanical system, vibropercussive mechanical system

PURPOSE AND COVERAGE: The results of investigations of the dynamics and stability of self-synchronizing and vibropercussive systems are presented. Principles of the theory of self-synchronizing systems and the synthesis of such systems in accordance with given dynamic characteristics are discussed. Analytic relationships for calculating their steady-state modes of motion, existence conditions, and stability, are presented as well as equations of small oscillations; also practical systems are solved. A number of new results

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ACC NR: AM6010193

connected with the dynamics and stability of vibropercussive systems are obtained, and many one- and two-mass vibropercussive systems are investigated. The analytic results obtained here were confirmed experimentally (in the majority of cases), and with the aid of computers. For the most part, only the results of the personal investigations of the authors are given. This book is intended for scientists and engineers.

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ACC NR: AM6010193

SUB CODE: 26/ SUBM DATE: 03Dec65/ ORIG REF: 415/ OTH REF: 055/

Card 3/3

RAGUL'SKENE, V.L. [Ragulskiene, V.]

Dynamics and stability of a pulsed vibratory-percussion system with two degrees of freedom. Trudy AN Lit. SSR. Ser.B no.1:137-142 '65. (MIRA 18:7)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

RAGUL'SKENE, V.L. [Ragulskiene, V.]; RAGUL'SKIS, K.M. [Ragulskis, K.]

Theory of vibratory percussion machines. Trudy AN Lit. SSR Ser. B no.3:113-119 '63. (MIRA 18:3)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

L 52746-65

ACCESSION NR: AP5009173 UR/0236/65/000/001/0137/0148

18
16
B

AUTHOR: Ragulskiene, V. (Ragul'skenye, V.L.)

TITLE: Dynamics and stability of a pulsed vibro-impact system with two degrees of freedom

SOURCE: AN LitSSR Trudy. Seriya B. Fiziko-matematicheskiye, khimicheskiye, geologicheskiye i tekhnicheskiye nauki, no. 1, 1965, 137-148

TOPIC TAGS: pulsed vibro-impact system, vibro-impact system dynamics, vibro-impact system stability, automatic control system, periodic motion

ABSTRACT: The author has investigated the strongly nonlinear, dynamic, fourth order system consisting of two masses in which one of the masses is connected elastically to a fixed support while the second, freely moving along a straight line, collides with the first mass following the pulsed action of an external force. The differential equations of the motion between the instants of collision is given by

$$\left.\begin{aligned} m_1\frac{d^2x_1}{dt^2}+c_1x_1=0,\\ m_2\frac{d^2x_2}{dt^2}=F(t)=F\sum_{k=0}^{\infty}\delta(t-kT), \end{aligned}\right\} \quad (1)$$

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where m_1 and m_2 are the respective masses, x_1 and x_2 = displacements from the position of static equilibrium of m_1 of the impact surfaces of the masses m_1 and m_2, respectively, c_1 = spring coefficient, F = const.

$$F\int_{kT-0}^{kT+0}\delta(t-kT)\,dt=\sigma, \qquad (2)$$

and σ is the impulse of the external force. Formulas are derived for the free vibro-impact conditions of motion taking into account the constant component of the external force, and for the exact calculation of the transient vibro-impact processes (for increasing and decreasing times and conditions near the n-fold impact periodic motion). The author also carries out the first known determinations of the n-fold vibro-impact periodic motion conditions and discusses their stability. An approximate method is proposed for the evaluation of transients from both time directions using the fact (noticed by the author) that near n-fold vibro-impact periodic motions the difference between the motion parameters of the two masses is quite small during the interval of time following each second impact. The results are applicable to certain vibro-impulse systems of automatically controlled metal-cutting stands, and the like. Orig. art. has: 70 formulas.

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L 52746-65

ACCESSION NR: AP5009173

ASSOCIATION: Institut energetiki i elektrotekhniki Akademii nauk Litovskoy SSR (Institute of Power and Electrical Engineering, Academy of Sciences of the Lithuanian SSR)

SUBMITTED: 27May64 ENCL: 00 SUB CODE: ME

NO REF SOV: 005 OTHER: 000

Card 3/3

RAGUL'SKIS, Kazimeras [Ragulskis, Kazimieras]; PETRAUSKAS, V., red.

[Mechanisms on a vibrating base; problems of dynamics and stability] Mekhanizmy na vibriruiushchem osnovanii; voprosy dinamiki i ustroichivosti. Kaunas, Akad. nauk Litovskoi SSR, 1963. 231 p. (MIRA 16:6)
(Mechanisms--Vibration)

RAGUTIS, K.

Lever and cam drive with a rectilinear cam. In Russian.

p. 87(Lietuvos TSR Mokslu Akademija. Fizikos-technikos institutas. Darbai. Vol. 2, 1956, Vilnius, Lithuania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERII B. No. 2, 1958

Ragulskis, K. Drawing cam mechanisms with cams of minimum dimensions. In Russian. p. 149.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIIA B. No. 2, 1958

Ragulskis, K. Calculations of dimensions of the cam mechanisms. In Russian. p. 157.

Monthly list of East European Accessions (EEAI) LC. Vol. 8, No. 2, February 1959, Unclass.

RAGULSKIS, K.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIIA B. No. 3, 1958

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Ragul'skis, Kazimeras Mikolo; Vitkus, Ionas Iono; Ragul'skene, Vida Leono

Self-synchronization of mechanical systems. [pt] 1: Self-synchronizing and vibro- percussive systems (Samosinkhronizatsiya mekhanicheskikh sistem. [ch.] 1: Samosinkhronnyye i vibroudarnyye sistemy) Vilnyus, Izd-vo "Mintis", 1965. 185 p. illus., biblio. (At head of title: Akademiya nauk Litovskoy SSR. Institut energetiki i elektrotekhniki) 1400 copies printed.

TOPIC TAGS: mechanical engineering, vibration theory, vibration analysis, mechanical vibration, self synchronizing mechanical system, vibropercussive mechanical system

PURPOSE AND COVERAGE: The results of investigations of the dynamics and stability of self-synchronizing and vibropercussive systems are presented. Principles of the theory of self-synchronizing systems and the synthesis of such systems in accordance with given dynamic characteristics are discussed. Analytic relationships for calculating their steady-state modes of motion, existence conditions, and stability, are presented as well as equations of small oscillations; also practical systems are solved. A number of new results

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connected with the dynamics and stability of vibropercussive systems are obtained, and many one- and two-mass vibropercussive systems are investigated. The analytic results obtained here were confirmed experimentally (in the majority of cases), and with the aid of computers. For the most part, only the results of the personal investigations of the authors are given. This book is intended for scientists and engineers.

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